Signal Colour Scheme

- PWR-12V
- GND
- Sensor GND
- Sensor 5V
- Ignition
- HVIL

PARTS FIGTURE

- Twisted Pair
- Chassis Grounding Lug

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN MILLIMETERS
ALL DIMENSIONS APPLY AFTER FINISH
BREAK ALL EDGES TO R 0.1-0.4

TOLERANCES:
DECIMALS
.XX ± .1
.X ± .3
X ± 1
ANGLES
.XX ± 0.1°
.X ± 0.5°

DO NOT SCALE DRAWING

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DRAWN SHUBHAM SONAR	DATE 11/14/2022	
DESIGN	DATE	
CHECKED SHUBHAM SONAR	DATE 11/14/2022	
APPROVED SHUBHAM SONAR	DATE 11/14/2022	
MATERIAL		
HEAT TREAT		
FINISH		

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

W0102

POWERBED HARNESS

SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C
SCALE 1:1		POWERBED HARNESS	SHEET NO.01

1-POWERBED HARNESS

Drawing	Description	Revision	Date	Created by
01	Front Page	C	11/14/2022	SHUBHAM SONAR
02	Drawings list	C	11/14/2022	SHUBHAM SONAR
03	Drawings list	C	11/14/2022	SHUBHAM SONAR
04	Revision descriptions	C	11/14/2022	SHUBHAM SONAR
05	LittelFuse and Relay Box, mRFRM loadout	C	11/14/2022	SHUBHAM SONAR
06	VMAX A PD and 12v battery	C	11/14/2022	SHUBHAM SONAR
07	Connector table	C	11/14/2022	SHUBHAM SONAR
08	VMAX C ISObus PWR	C	11/14/2022	SHUBHAM SONAR
09	Connector table	C	11/14/2022	SHUBHAM SONAR
10	VMAX 12V Charging Bypass	C	11/14/2022	SHUBHAM SONAR
11	Connector table	C	11/14/2022	SHUBHAM SONAR
12	Connector Table	C	11/14/2022	SHUBHAM SONAR
13	VMAX GND	C	11/14/2022	SHUBHAM SONAR
14	Connector table	C	11/14/2022	SHUBHAM SONAR
15	Throttle, TFD, SBC-24 J1 GND,& Start Button	C	11/14/2022	SHUBHAM SONAR
16	Connector Table	C	11/14/2022	SHUBHAM SONAR
17	PE Coolant Temp, MTA, FNR, & LT Switch	C	11/14/2022	SHUBHAM SONAR
18	Connector table	C	11/14/2022	SHUBHAM SONAR
19	Power Distribution HWB60	C	11/14/2022	SHUBHAM SONAR
20	Connector table	C	11/14/2022	SHUBHAM SONAR
21	Connector table	C	11/14/2022	SHUBHAM SONAR
22	Power Distribution HWB60	C	11/14/2022	SHUBHAM SONAR
23	Connector table	C	11/14/2022	SHUBHAM SONAR
24	Connector table	C	11/14/2022	SHUBHAM SONAR
25	mRFRM, TTC580, and ACDB Pwr and SBC24-J2 GND	C	11/14/2022	SHUBHAM SONAR
26	Connector table	C	11/14/2022	SHUBHAM SONAR
27	Power Distribution mRFRM	C	11/14/2022	SHUBHAM SONAR
28	Connector table	C	11/14/2022	SHUBHAM SONAR
29	VMAX/HMI Igns, Hand Throttle Pwr	C	11/14/2022	SHUBHAM SONAR
30	Connector table	C	11/14/2022	SHUBHAM SONAR
31	Power Distribution IX3212	C	11/14/2022	SHUBHAM SONAR
32	Connector tables	C	11/14/2022	SHUBHAM SONAR
33	Connector Table	C	11/14/2022	SHUBHAM SONAR
34	Power Distribution IX3212	C	11/14/2022	SHUBHAM SONAR

X ± 03

XXX ± 005

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SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C
SCALE 1:1		POWERBED HARNESS	SHEET NO. 02

-> 1-POWERBED HARNESS

Drawing	Description	Revision	Date	Created by
35	Connector table	C	11/14/2022	SHUBHAM SONAR
36	HVIL	C	11/14/2022	SHUBHAM SONAR
37	Main CAN 2 & CAN 4	C	11/14/2022	SHUBHAM SONAR
38	Connector table	C	11/14/2022	SHUBHAM SONAR
39	CAN 3	C	11/14/2022	SHUBHAM SONAR
40	Connector table	C	11/14/2022	SHUBHAM SONAR
41	F_HRI, HOC_PEC_PWR_GND_PWM	C	11/14/2022	SHUBHAM SONAR
42	Connector table	C	11/14/2022	SHUBHAM SONAR
43	W0102 REV A POWERBED HARNESS - LIST OF WIRES	C	11/14/2022	SHUBHAM SONAR
44	W0102 REV A POWERBED HARNESS - LIST OF WIRES	C	11/14/2022	SHUBHAM SONAR
45	W0102 REV A POWERBED HARNESS - LIST OF WIRES	C	11/14/2022	SHUBHAM SONAR
46	W0102 REV A POWERBED HARNESS - LIST OF WIRES	C	11/14/2022	SHUBHAM SONAR
47	W0102 REV A POWERBED HARNESS - LIST OF WIRES	C	11/14/2022	SHUBHAM SONAR
48	W0102 REV A POWERBED HARNESS - LIST OF WIRES	C	11/14/2022	SHUBHAM SONAR
49	W0102 REV A POWERBED HARNESS - LIST OF WIRES	C	11/14/2022	SHUBHAM SONAR
50	W0102 REV A POWERBED HARNESS - LIST OF WIRES	C	11/14/2022	SHUBHAM SONAR
51	W0102 REV A POWERBED HARNESS - LIST OF WIRES	C	11/14/2022	SHUBHAM SONAR
52	W0102 REV A POWERBED HARNESS - LIST OF WIRES	C	11/14/2022	SHUBHAM SONAR
53	W0102 REV A POWERBED HARNESS - LIST OF WIRES	C	11/14/2022	SHUBHAM SONAR
64	W0102 REV A POWERBED HARNESS - LIST OF WIRES	0	12/19/2022	SHUBHAM SONAR
54	W0102 REV A POWERBED HARNESS - BOM	C	11/14/2022	SHUBHAM SONAR
55	W0102 REV A POWERBED HARNESS - BOM	C	11/14/2022	SHUBHAM SONAR
56	W0102 REV A POWERBED HARNESS - BOM	C	11/14/2022	SHUBHAM SONAR
57	W0102 REV A POWERBED HARNESS - BOM	C	11/14/2022	SHUBHAM SONAR
58	W0102 REV A POWERBED HARNESS - BOM	C	11/14/2022	SHUBHAM SONAR
59	W0102 REV A POWERBED HARNESS - BOM	C	11/14/2022	SHUBHAM SONAR
60	W0102 REV A POWERBED HARNESS - BOM	C	11/14/2022	SHUBHAM SONAR
61	W0102 REV A POWERBED HARNESS - BOM	C	11/14/2022	SHUBHAM SONAR
62	W0102 REV A POWERBED HARNESS - BOM	0	11/14/2022	SHUBHAM SONAR
63	PowerBed Harness	C	11/14/2022	SHUBHAM SONAR

X ± 03

XXX ± 005

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SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C
SCALE 1:1		POWERBED HARNESS	SHEET NO. 03

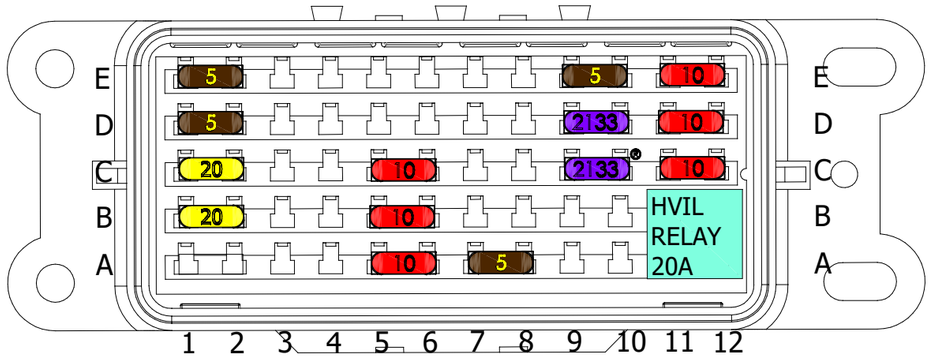
Revision Log

----------REV 2----------
SHEET 05 - ADDED F04 05A HVIL AND MRFRM IGNITION IN THE DESCRIPTION.
SHEET 06 - REMOVED BATTERY GROUND CABLE. DELETED MASTER SWITCH,FUSE AND FUSE HOLDER MANUFACTURER PART NUMBER.
SHEET 08 - DELETED TEC POWER CABLE.
SHEET 15 - ADDED SP-048, SP-49, JP-0212 AND JS-0212 CAN2 TERMINATING RESISTOR. ADDED BP-001:58 - HRI GROUND FOR FENDER AND B-PILAR
SHEET 17 - MOVED FRONT_BED_COOLANT_TEMP_2.8K@25C SIGNAL PIN TO JS-225:20
SHEET 34 - CHANGED DESIGNATION FOR 5V USB CONVERTER AND 12V OUTLET TO JS-0233 AND JS-0234
SHEET 37 - ADDED SP-46, SP-47, JP-0214 AND JS-0214 FOR CAN4 TERMINATION.
SHEET 39 - ADDED SP-44, SP-43, JS-0213 AND JP-0213 FOR CAN3 TERMINATION.
SHEET 41 - ADDED BP-001:57 - HRI_PWR_FENDER_B-PILAR
----------X----------
----------REV B----------
SHEET 06 - DELETED DEFU PUMP'S CONNECTOR JS-072, G3, X-208B2, 100A FUSE
SHEET 10 - ADDED SP-55
SHEET 13 - CHANGED TERMINAL TO 643231029 ON JS-235{A,B,C}:G4
SHEET 15 - ADDED WIRE SEAL 967067-1 ON JS-226
    START BUTTON LED 12V FROM DASH CONNECTOR JS-225:31
    CHANGED WIRE GAUGE TO 20 AWG ON BP-001:58
SHEET 17 - ADDED JS-225:31
SHEET 19 - CHANGED WIRE GAUGE OF WIRE NUMBER 58-63 TO 14 AWG
    CHANGED WIRE GAUGE TO 16 AWG ON BP-001:{12-15}
    DELETED BP-001:17
    ADDED SP-50,51,52,53 TO AVOID DOUBLE CRIMPING AT X-214
SHEET 25 - CHANGED WIRE GAUGE TO 20 AWG ON BP-001:21
SHEET 27 - CHANGED PIN ON BS-022 FROM 9 TO 11
SHEET 31 - CHANGED WIRE GAUGE TO 16 AWG ON BP-001:44 AND JS-0244:6
SHEET 36 - CHANGED PIN ON BS-022 FROM 7 TO 12 AND 8 TO 10
SHEET 37 - CHANGED WIRE GAUGE TO 20 AWG ON BP-001:46,47
    CHANGED PIN ON BP-001:45 TO BP-001:47
SHEET 39 - CHANGED WIRE GAUGE TO 20 AWG ON BP-001:50,51
----------X----------
----------REV C----------
SHEET 05 - F9 CHNAGED NAME TO MTA DASH AND HMI POWER
SHEET 06 - UPDATED BUSBAR BAR CONNECTION AND DELETED TORQUE INSTRUCTIONS
SHEET 08 - DELETED TORQUE INSTRUCTIONS
SHEET 15 - CHANGED JS-227 NAME TO TFD REDUNDANT CONNECTOR
SHEET 15 - CHANGED JS-228 NAME TO TFD MAIN CONNECTOR
SHEET 15 - FIXED THE WIRE NAME FOR WIRE NUMBER 26 to TFD_MAIN_CAN2_LOW
SHEET 17 - SWAPPED JS-225:23 AND JS-225:25
SHEET 17 - MOVED PIN FROM JS-225:22 TO JS-225:5
SHEET 18 - FIXED JS-0225 CONENCTOR TABLE
SHEET 41 - PIN OUT CHANGES ON CONNECTOR JS-0224
SHEET 41 - DO NOT TOUCH PINS 1,2,5 AND 6
SHEET 41 - SWAP PINS JS-0224:8 AND JS-0224:11
SHEET 41 - DE-PIN PIN NUMBER JS-0224:10 AND RE-INSERT INTO CAVITY JS-0224:9
SHEET 41 - DE-PIN PIN NUMBER JS-0224:12 AND RE-INSERT INTO CAVITY JS-0224:7
UPDATED FORMBOARD WITH BP-001:45 TO BP-001:47 PIN CHANGES
ADDED JP-0212, JP-0213, and JP-0214 120 OHMS CAN RESISTOR CONNECTION NOTES ON FORMBOARD AND SCHEMATIC
UPDATED 5.4 NOTE ON THE FORMBOARD
ADDED NOTES ON FORMBOARD FOR JS-227 and JS-228
ADDED CONNECTOR INSERTION VIEWS FOR ALL THE CONNECTORS ON THE FORMBOARD
INCREASE LENGHT ON JS-0233 AND JS-0234 BRANCHES TO 300mm (WIRE ID 146,155,156)
----------X----------

Revision Log (contd.)

X ± 03			Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com	
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1		POWERBED HARNESS	SHEET NO. 04

+L3-X-214A



Fuse and relay assignment for LittelFuse Box PN:PDM21001LXM

E01-E02 - 05A ECOTRON_4
D01-D02 - 05A ECOTRON_3
C01-C02 - 20A ECOTRON_2
B01-B02 - 20A ECOTRON_1
C05-C06 - 10A TTC580_3
B05-B06 - 10A TTC580_2
A05-A06 - 10A TTC580_1
A07-A08 - 5A TFD_2
E09-E10 - 5A TFD_1
D09-D10 - 121OHMS Vmax_BY_Pass_Resistor
C09-C10 - 121OHMS Vmax_By_Pass_Resistor
E11-E12 - 10A Vmax_Inner
D11-D12 - 10A Vmax_Middel
C11-C12 - 10A Vmax_Outer

mRFRM Fuse Values/Functions for
Monarch PN: V6012 / Eaton DWG# 154M2-130-0

F01
F02 05A HVIL SOURCE FOR ACDB
F03
F04 05A HVIL and mRFRM Ignition
F05 10A ISObus Power (Trailer Power)
F06
F07 2A Left Turn Signal
F08 2A Right Turn Signal
F09 2A MTA Dash and HMI Power
F10 10A Steering Valve
F11
F12 30A Smart Implement 12V
F13 10A Gen5S9 Power
F14
F15 2A TTC580 Ign (KL15)
F16 2A 12V Hydraulic Pump Ign
F17 2A TTC580 uBatt
F18 5A Lord TFD Steering
F19 2A OTA TTC580 Relay
F20 10A VMAX Power
F21 30A Ecotrons Shift Power
F22 10A mRFRM Power
F23 2A HV Systems Ign
F24 10A TTC32 & BMS Power
F25 10A Addon Front Sensor
F26 5A ACDB Power
F27
F28 30A TTC580 Power

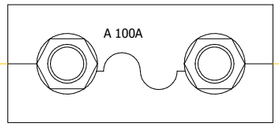
X ± 03		Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com		
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1		POWERBED HARNESS	SHEET NO. 05

-BP-001
TE Connectivity
DRB12-102PAE-L018

Powerbed Chassis Bulkhead

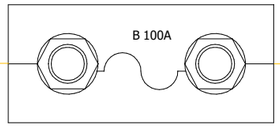
3 RD 4 AWG Roof_Power

-X-208A
125A MIDI Fuse and Fuse Holder for Tractor DC-DC
LMI1-M-1-0



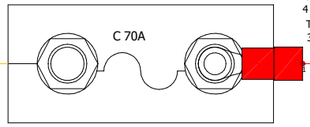
Busbar

-X-208A
125A MIDI Fuse and Fuse Holder for Tractor DC-DC
LMI1-M-1-0



Busbar

-X-208C
70A MIDI FUSE and Fuse Holder for Roof Power
LMI1-M-1-0

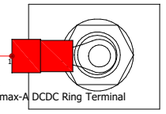


Busbar

-X-208C2
4 AWG Roof Power Ring terminal
TE Connectivity
33114

3 RD 4 AWG Roof Power

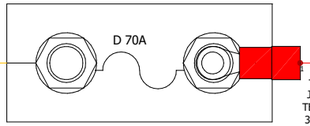
-JS-232A
Vmax-Inner DCDC Output Stud M8x1.25 [5/16" OD]



1 RD 1/0 AWG DCDC Output

-JS-232A1
1/0 AWG Vmax-A DCDC Ring Terminal
Panduit
LCA1/0-38F-X

-X-208D
70A MIDI Fuse and Fuse holder for IX3212 SSPDM
LMI1-M-1-0



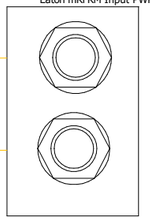
Busbar

4 RD 4 AWG Power (+)

-X-208D2
J2 - HVFB IX3212 PWR Ring TerminalRing Terminal
TE Connectivity
33114

Busbar

-X-0205_L1-L2
Eaton mRFRM Input PWR M8 Stud L1 and L2



-JS-243
J2 - HVFB IX3212 Pwr
TE Connectivity
DTHD06-1-4S

4 RD 4 AWG Power (+)

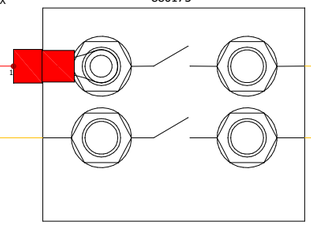
-G2
J1 - HVFB IX3212 Ground Ring Terminal
TE Connectivity
323175

-JS-242
J1 - HVFB IX3212 Ground
TE Connectivity
DTHD06-1-4S

7 BK 4 AWG Ground (-)

-X-0210A1
12V Master Switch DCDC Ring Terminal
Panduit
S1/0-12R-X

-X-0210
12V Master Switch
Cole Hersee
880175



1 RD 1/0 AWG DCDC Output

Busbar

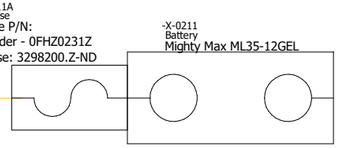
Busbar

Busbar

Busbar

+L3-X-0211A
Battery Fuse
LittelFuse P/N:
Fuse Holder - 0FHZ0231Z
200A Fuse: 3298200.Z-ND

-X-0211
Battery
Mighty Max ML35-12GEL



Busbar

X ± 03		Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com		
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1	POWERBED HARNESS	SHEET NO. 06	

-X-208C2

Fuse : 70A

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	3	=F1+L1-BP-001:43	33114			06-6-C

-X-208D2

Fuse : 70A

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	4	=F1+L1-JS-243:1	33114			06-6-D

-JS-243

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	4	=F1+L1-X-208D2:1	0462-203-04141			06-9-B

-JS-242

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	7	=F1+L1-G2:1	0462-203-04141			06-9-C

-JS-232A1

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	1	=F1+L1-X-0210A1:1	19221-0422			06-3-C

-X-0210A1

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	1	=F1+L1-JS-232A1:1	S1/0-12R-X			06-2-D

-G2

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	7	=F1+L1-JS-242:1	323175			06-8-C

X ± 03

XXX ± 005

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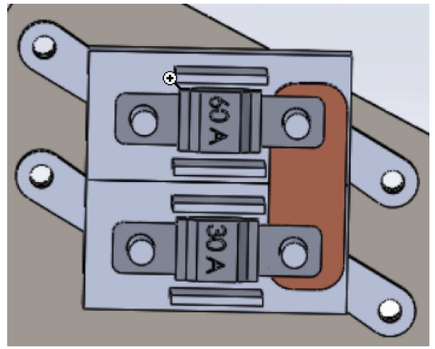
SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C

SCALE		POWERBED HARNESS	SHEET NO. 07
	1:1		



-X-208F
MIDI Fuse and Fuse Holder for ISOBus PWR 60A

-X-208F1
8 AWG, ISOBus_PWR_60A_1/4" Stud Ring Terminal
TE Connectivity
33460

F 60A

Busbar

-X-208G
MIDI Fuse and Fuse Holder for ISOBus_PWR_ECU

-X-208H1
12AWG, ISOBus_PWR_ECU_M5 Stud Ring Terminal
TE Connectivity
170725-2

H 30A

-X-208H2
Ring Terminal
TE Connectivity
170725-2

Busbar

-BP-001
TE Connectivity
DRB12-102PAE-L018

1 8 RD 12 AWG ISOBus_PWR_ECU
48 9 RD 8 AWG ISOBus_Power_60A

Powerbed Chassis Bulkhead

9 RD 8 AWG ISOBus_Power_60A
8 RD 12 AWG ISOBus_PWR_ECU
10 RD 14 AWG Vmax_Res_1_Input → 10-6

Fuse Holder P/N:
LMI1-M-1-0

MIDI/AMI Fuses
Littelfuse P/Ns:
60A: 0498060
30A: 0498030

X ± 03	Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com			
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1		POWERBED HARNESS	SHEET NO. 08

-X-208H2

Ring Terminal

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	10	=F1+L1-X-214:10D	19164-0003			08-5-F

-X-208F1

Fuse : 60A

8 AWG, ISOBus_PWR_60A_1/4" Stud Ring Terminal

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	9	=F1+L1-BP-001:48	33461			08-4-E

-X-208H1

Fuse : 30A

12AWG, ISOBus_PWR_ECU_M5 Stud Ring Terminal

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	8	=F1+L1-BP-001:1	170725-2			08-4-F

X ± 03

XXX ± 005

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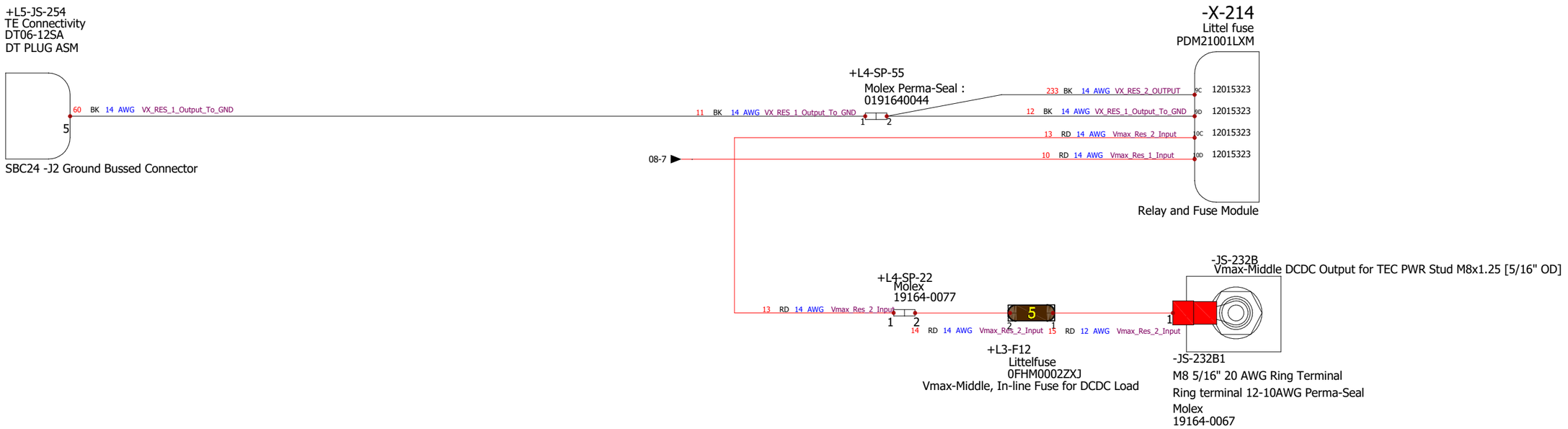
SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 09



X ± 03			Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com	
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1		POWERBED HARNESS	SHEET NO. 10

-X-214 — Fuse and Relay Box

1 of 2

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1A					12010300	
1B	90	=F1+L4-SP-53:2	12084201	12089679		19-9-A
1C	91	=F1+L4-SP-53:2	12084201	12089679		19-9-A
1D	92	=F1+L4-SP-53:2	12084201	12089679		19-9-A
1E	93	=F1+L4-SP-53:2	12084201	12089679		19-9-A
2A					12010300	
2B	64	=F1+L1-BP-001:12	12077411	12015323		19-9-A
2C	65	=F1+L1-BP-001:13	12077411	12015323		19-9-A
2D	66	=F1+L1-BP-001:14	12077411	12015323		19-9-A
2E	67	=F1+L1-BP-001:15	12077411	12015323		19-9-A
3A					12010300	
3B					12010300	
3C					12010300	
3D					12010300	
3E					12010300	
4A					12010300	
4B					12010300	
4C					12010300	
4D					12010300	
4E					12010300	
5A	73	=F1+L4-SP-50:2	12129493	12015323		19-9-A
5B	74	=F1+L4-SP-50:2	12129493	12015323		19-9-A
5C	5	=F1+L4-SP-50:2	12129493	12015323		19-9-A
5D					12010300	
5E					12010300	
6A	70	=F1+L4-SP-23:1	12129493	12015323		19-9-A
6B	71	=F1+L4-SP-24:1	12129493	12015323		19-9-A
6C	72	=F1+L4-SP-25:1	12129493	12015323		19-9-A
6D					12010300	
6E					12010300	

-X-214 — Fuse and Relay Box

2 of 2

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
7A	106	=F1+L4-SP-52:2	12084201	12089679		19-9-A
7B					12010300	
7C					12010300	
7D					12010300	
7E					12010300	
8A	78	=F1+L1-JS-227:2	12084201	12089679		19-9-A
8B					12010300	
8C					12010300	
8D					12010300	
8E					12010300	
9A					12010300	
9B					12010300	
9C	233	=F1+L4-SP-55:2	12129493	12015323		10-9-A
9D	12	=F1+L4-SP-55:2	12129493	12015323		10-9-A
9E	77	=F1+L4-SP-52:2	12084201	12089679		19-9-A
10A					12010300	
10B					12010300	
10C	13	=F1+L4-SP-22:1	12129493	12015323		10-9-A
10D	10	=F1+L1-X-208H2:1	12129493	12015323		10-9-A
10E	79	=F1+L1-JS-228:2	12084201	12089679		19-9-A
11A	103	=F1+L4-SP-54:2	12084201	12089679		27-9-C
11B	232	=F1+L4-SP-54:2	12084201	12089679		27-9-C
11C	80	=F1+L4-SP-51:2	12084201	12089679		19-9-A
11D	81	=F1+L4-SP-51:2	12084201	12089679		
11E	82	=F1+L4-SP-51:2	12084201	12089679		19-9-A
12A	114	=F1+L1-BP-001:32	12084201	12089679		27-9-C
12B	115	=F1+L1-BP-001:30	12129493	12089679		27-9-C
12C	85	=F1+L1-JS-235C:H1	12129493	12015323		
12D	84	=F1+L1-JS-235B:H1	12129493	12015323		22-9-A
12E	83	=F1+L1-JS-235A:H1	12129493	12015323		22-9-A

+L5-JS-254 — SBC24 -J2 Ground Bussed Connector

LOCK: W-12S

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	16	=F1+L1-JS-235C:G4	0462-201-16141			13-2-A
2	17	=F1+L1-JS-235B:B2	0462-201-16141			13-2-A
3	18	=F1+L1-JS-235A:C2	0462-201-16141			13-2-A
4	94	=F1+L1-BS-022:2	0462-201-16141			25-1-C
5	11	=F1+L4-SP-55:1	1062-16-0122			10-2-B
6	102	=F1+L4-SP-54:1	0462-201-16141			27-2-E
7	135	=F1+L1-JS-0245:12	0462-201-16141			31-2-D
8					114017-ZZ	
9	95	=F1+L1-JS-0238:11	0462-201-16141			25-1-C
10					114017-ZZ	
11	19	=F1+L1-JS-235A:G4	0462-201-16141			13-2-A
12	20	=F1+L1-JS-235B:G4	0462-201-16141			13-2-A

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 11

-JS-232B1

M8 5/16" 20 AWG Ring Terminal

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	15	=F1+L3-F12:1	19164-0003			10-8-C

+L4-SP-22

Vmax B Inline fuse splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	13	=F1+L1-X-214:10C		Splice		10-7-C
2	14	=F1+L3-F12:2		Splice		

+L3-F12

Vmax-Middle, In-line Fuse for DCDC Load

Vmax-Middle, In-line Fuse for DCDC Load

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	15	=F1+L1-JS-232B1:1				10-8-C
2	14	=F1+L4-SP-22:2				

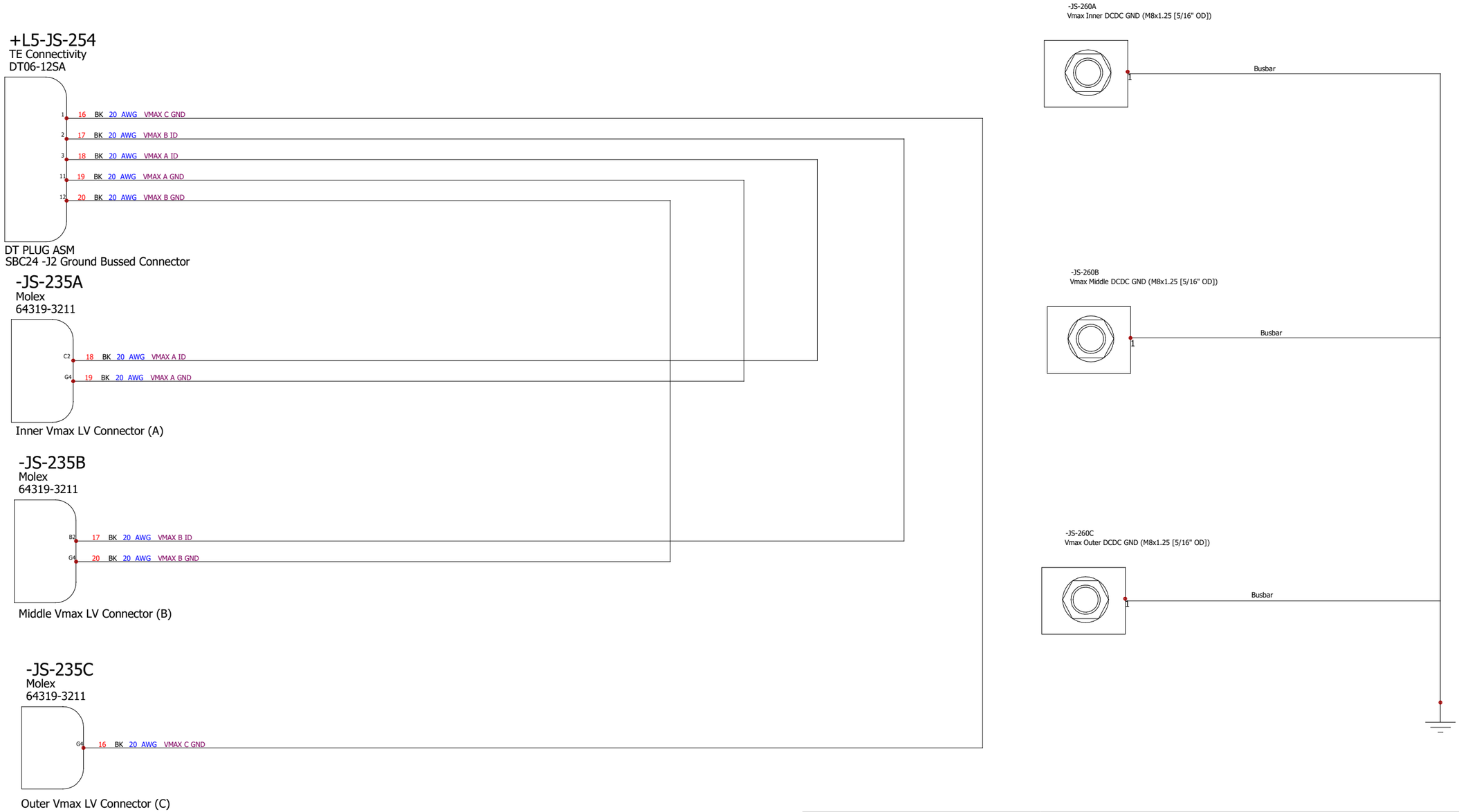
X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C

SCALE		POWERBED HARNESS	SHEET NO. 12
	1:1		



X ± 03	Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com			
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1	POWERBED HARNESS	SHEET NO. 13	

+L5-JS-254

SBC24 -J2 Ground Bussed Connector

LOCK: W-12S

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	16	=F1+L1-JS-235C:G4	0462-201-16141			13-2-A
2	17	=F1+L1-JS-235B:B2	0462-201-16141			13-2-A
3	18	=F1+L1-JS-235A:C2	0462-201-16141			13-2-A
4	94	=F1+L1-BS-022:2	0462-201-16141			25-1-C
5	11	=F1+L4-SP-55:1	1062-16-0122			10-2-B
6	102	=F1+L4-SP-54:1	0462-201-16141			27-2-E
7	135	=F1+L1-JS-0245:12	0462-201-16141			31-2-D
8					114017-ZZ	
9	95	=F1+L1-JS-0238:11	0462-201-16141			25-1-C
10					114017-ZZ	
11	19	=F1+L1-JS-235A:G4	0462-201-16141			13-2-A
12	20	=F1+L1-JS-235B:G4	0462-201-16141			13-2-A

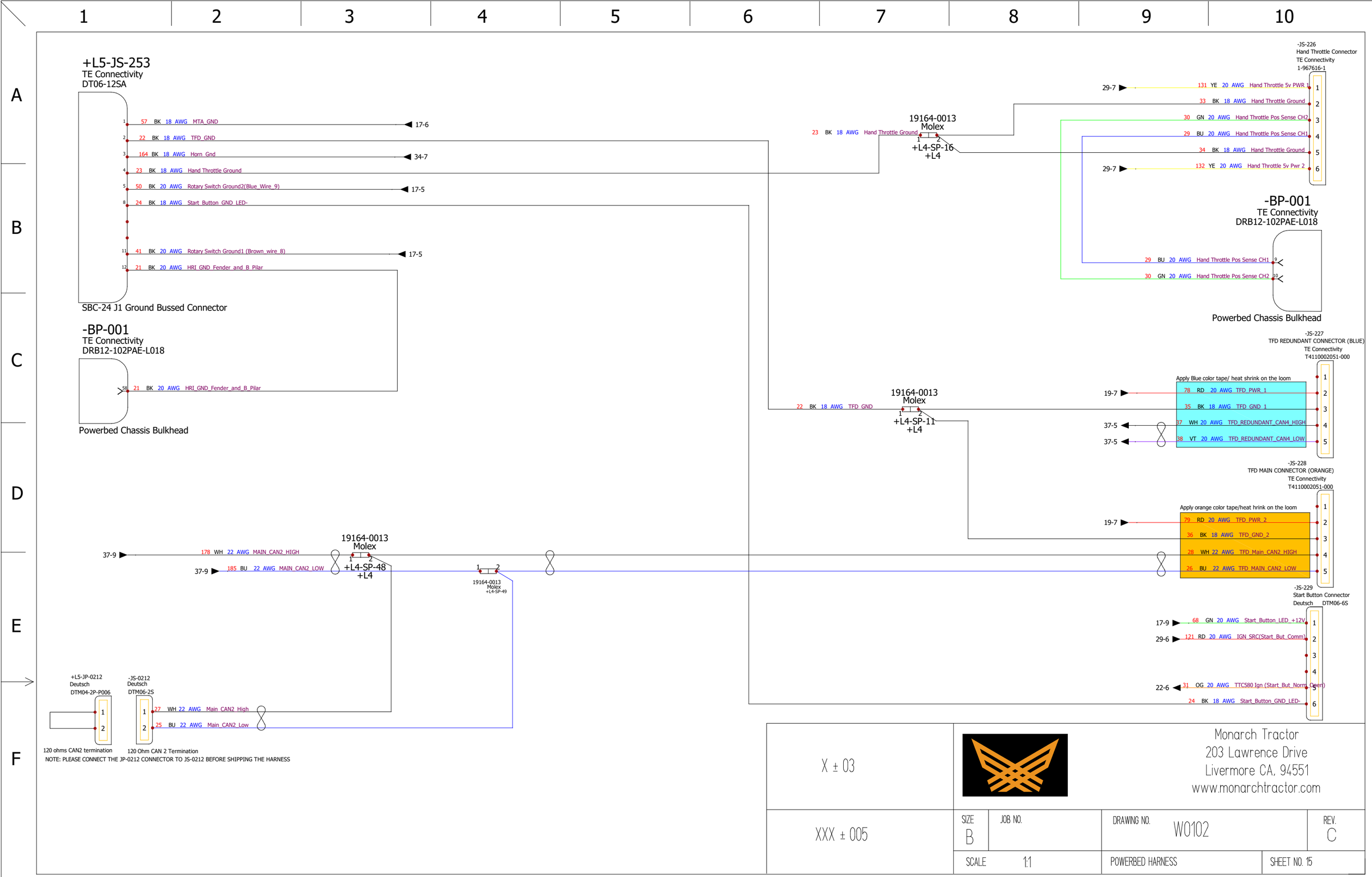
X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 14



X ± 03	Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com		
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102 / REV. C
	SCALE 1:1	POWERBED HARNESS	SHEET NO. 15

+L5-JS-253 — SBC-24 J1 Ground Bussed Connector

LOCK: W-12S

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	57	=F1+L1-JS-225:2	0462-201-16141			15-1-A
2	22	=F1+L4-SP-11:1	0462-201-16141			15-1-A
3	164	=F1+L1-JS-022:1	0462-201-16141			15-1-A
4	23	=F1+L4-SP-16:1	0462-201-16141			15-1-A
5	50	=F1+L1-JS-262:2	0462-201-16141			15-1-A
6	156	=F1+L1-JS-0234:-Ve	0462-201-16141			34-2-A
7	155	=F1+L1-JS-0233:-VE	0462-201-16141			34-2-A
8	24	=F1+L1-JS-229:6	0462-201-16141			15-1-A
9	213	=F1+L4-SP-7:1	0462-201-16141			41-1-A
10					114017-ZZ	
11	41	=F1+L1-JS-262:1	0462-201-16141			15-1-A
12	21	=F1+L1-BP-001:58	0462-201-16141			15-1-A

-JS-229 — Start Button Connector

LOCK: WM-6S

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	68	=F1+L1-JS-225:31	0462-005-20141			15-10-E
2	121	=F1+L1-JS-0240:3	0462-005-20141			15-10-E
3					0413-204-2005	15-10-E
4					0413-204-2005	15-10-E
5	31	=F1+L4-SP-13:1	0462-005-20141			15-10-E
6	24	=F1+L5-JS-253:8	0462-005-20141			15-10-E

-JS-226 — Hand Throttle Connector

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	131	=F1+L1-BP-001:39	0962885-5	0967067-1		15-10-A
2	33	=F1+L4-SP-16:2	0962885-5	0967067-1		15-10-A
3	30	=F1+L1-BP-001:10	0962885-5	0967067-1		15-10-A
4	29	=F1+L1-BP-001:9	0962885-5	0967067-1		15-10-A
5	34	=F1+L4-SP-16:2	0962885-5	0967067-1		15-10-A
6	132	=F1+L1-BP-001:40	0962885-5	0967067-1		15-10-A

-JS-227 — TFD REDUNDANT CONNECTOR (BLUE)

Apply Blue color tape on the loom

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1						15-10-C
2	78	=F1+L1-X-214:8A				15-10-C
3	35	=F1+L4-SP-11:2				15-10-C
4	37	=F1+L4-SP-47:1				15-10-C
5	38	=F1+L4-SP-46:1				15-10-C

-JS-228 — TFD MAIN CONNECTOR (ORANGE)

Apply orange color tape on the loom

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1						15-10-D
2	79	=F1+L1-X-214:10E				15-10-D
3	36	=F1+L4-SP-11:2				15-10-D
4	28	=F1+L4-SP-48:2				15-10-D
5	26	=F1+L4-SP-49:2				15-10-D

+L4-SP-16 — Hand Throttle Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	23	=F1+L5-JS-253:4		Splice		15-7-A
2	33; 34	=F1+L1-JS-226:2; =F1+L1-JS-226:5		Splice		

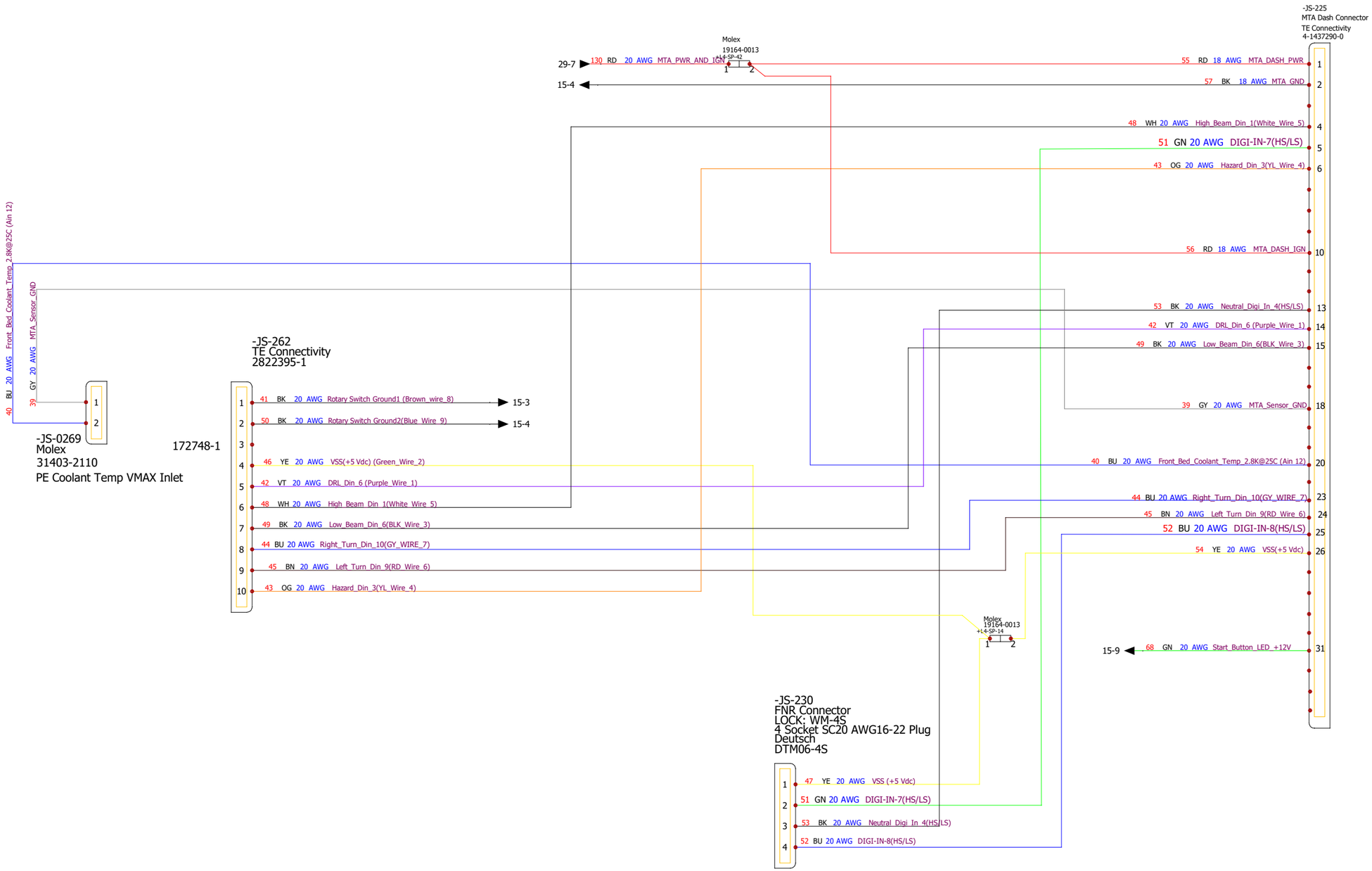
X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 16



X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C
SCALE 1:1		POWERBED HARNESS	SHEET NO. 17

-JS-225 — MTA Dash Connector

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	55	=F1+L4-SP-42:2	3-1447221-4			17-10-A
2	57	=F1+L5-JS-253:1	3-1447221-4			17-10-A
4	48	=F1+L1-JS-262:6	3-1447221-4			17-10-A
5	51	=F1+L1-JS-230:2	3-1447221-4			17-10-A
6	43	=F1+L1-JS-262:10	3-1447221-4			17-10-A
10	56	=F1+L4-SP-42:2	3-1447221-4			17-10-A
13	53	=F1+L1-JS-230:3	3-1447221-4			17-10-A
14	42	=F1+L1-JS-262:5	3-1447221-4			17-10-A
15	49	=F1+L1-JS-262:7	3-1447221-4			17-10-A
16	205	=F1+L4-SP-44:2	3-1447221-4			39-10-D
17	207	=F1+L4-SP-43:2	3-1447221-4			39-10-D
18	39	=F1+L1-JS-0269:1	3-1447221-4			17-10-A
20	40	=F1+L1-JS-0269:2	3-1447221-4			17-10-A
						17-10-A
23	44	=F1+L1-JS-262:8	3-1447221-4			17-10-A
24	45	=F1+L1-JS-262:9	3-1447221-4			17-10-A
25	52	=F1+L1-JS-230:4	3-1447221-4			17-10-A
26	54	=F1+L4-SP-14:2	3-1447221-4			17-10-A
31	68	=F1+L1-JS-229:1	3-1447221-4			17-10-A

-JS-0269 — PE Coolant Temp VMAX Inlet

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	39	=F1+L1-JS-225:18	33468-0003			17-3-C
2	40	=F1+L1-JS-225:20	33468-0003			17-3-C

-JS-262 — Rotary Switch Connector

Wedge Lock: 174656

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	41	=F1+L5-JS-253:11	173707-1	1-172888-3		17-4-C
2	50	=F1+L5-JS-253:5	173707-1	1-172888-3		17-4-C
3					172748-1	17-4-C
4	46	=F1+L4-SP-14:1	173707-1	1-172888-3		17-4-C
5	42	=F1+L1-JS-225:14	173707-1	1-172888-3		17-4-C
6	48	=F1+L1-JS-225:4	173707-1	1-172888-3		17-4-C
7	49	=F1+L1-JS-225:15	173707-1	1-172888-3		17-4-C
8	44	=F1+L1-JS-225:23	173707-1	1-172888-3		17-4-C
9	45	=F1+L1-JS-225:24	173707-1	1-172888-3		17-4-C
10	43	=F1+L1-JS-225:6	173707-1	1-172888-3		17-4-C

-JS-230 — FNR Connector

LOCK: WM-4S

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	47	=F1+L4-SP-14:1	0462-005-20141			17-7-E
2	51	=F1+L1-JS-225:5	0462-005-20141			17-7-E
3	53	=F1+L1-JS-225:13	0462-005-20141			17-7-E
4	52	=F1+L1-JS-225:25	0462-005-20141			17-7-E

+L4-SP-14 — VSS +5 Volt

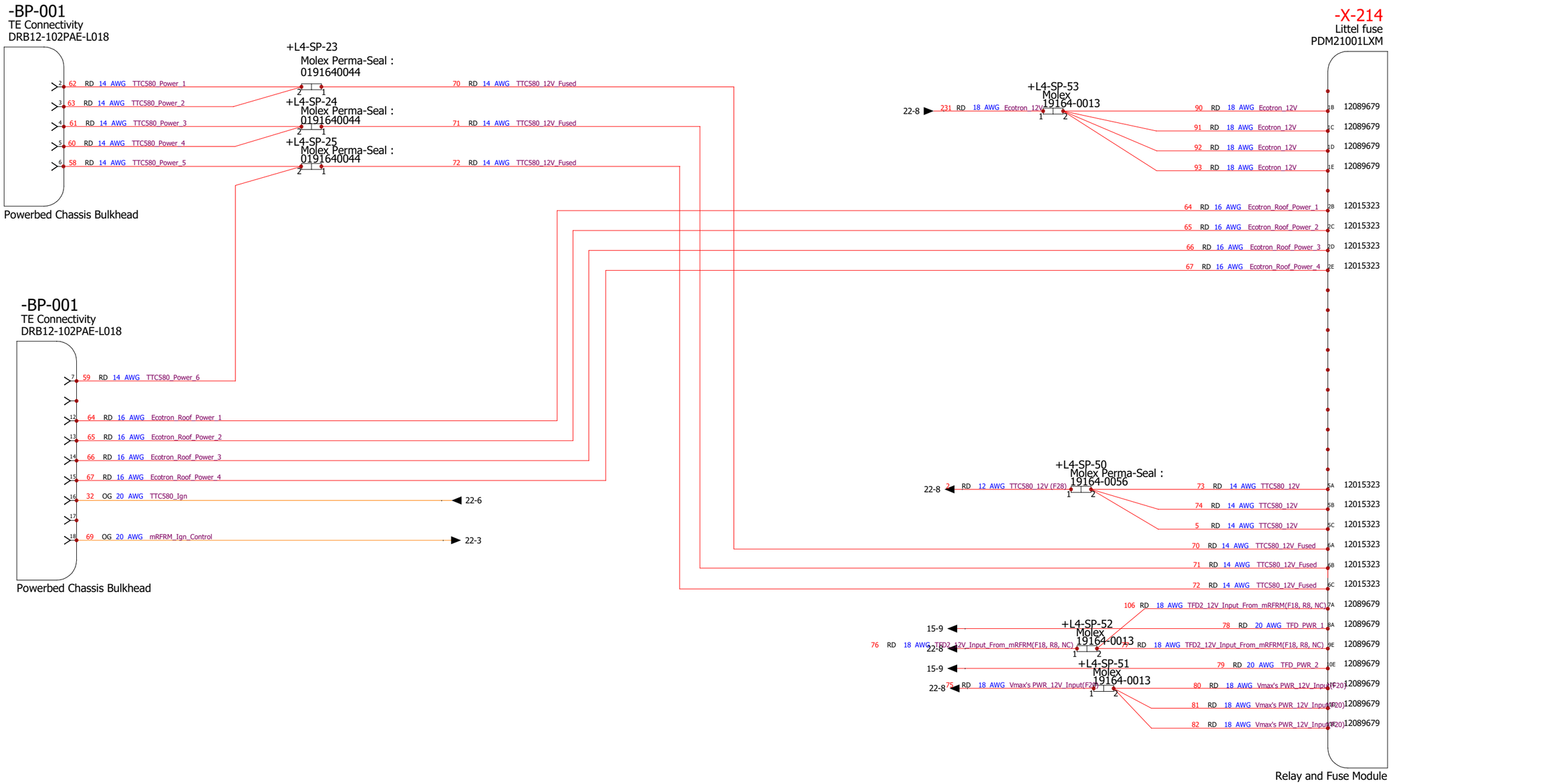
Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	46; 47	=F1+L1-JS-262:4; =F1+L1-JS-230:1				17-8-D
2	54	=F1+L1-JS-225:26				

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C
SCALE 1:1		POWERBED HARNESS	SHEET NO. 18



X ± 03	Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com			
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1		POWERBED HARNESS	SHEET NO. 19

-BP-001 — Powerbed Chassis Bulkhead

1 of 2

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	8	=F1+L1-X-208H1:1	0460-204-12141			08-1-E
2	62	=F1+L4-SP-23:2	0460-204-12141			19-1-A
3	63	=F1+L4-SP-23:2	0460-204-12141			19-1-A
4	61	=F1+L4-SP-24:2	0460-204-12141			19-1-A
5	60	=F1+L4-SP-24:2	0460-204-12141			19-1-A
6	58	=F1+L4-SP-25:2	0460-204-12141			19-1-A
7	59	=F1+L4-SP-25:2	0460-204-12141			19-2-C
8					114017	
9	29	=F1+L1-JS-226:4	0460-202-16141			15-10-B
10	30	=F1+L1-JS-226:3	0460-202-16141			15-10-B
11						
12	64	=F1+L1-X-214:2B	0460-202-16141			19-2-C
13	65	=F1+L1-X-214:2C	0460-202-16141			19-2-C
14	66	=F1+L1-X-214:2D	0460-202-16141			19-2-C
15	67	=F1+L1-X-214:2E	0460-202-16141			19-2-C
16	32	=F1+L4-SP-13:1	0460-202-16141			19-2-C
17			0460-202-16141			19-2-C
18	69	=F1+L1-JS-0280:4	0460-202-16141			19-2-C
19	96	=F1+L1-JS-0240:4	0460-202-16141			25-7-A
20					114017	
21	98	=F1+L1-JS-0239:1	0460-202-16141			25-7-A
22	99	=F1+L4-SP-12:1	0460-202-16141			25-7-A
23	100	=F1+L4-SP-12:1	0462-209-16141			25-7-A
24	118	=F1+L4-SP-1:2	0462-209-16141			27-9-B
25	117	=F1+L4-SP-1:2	0460-202-16141			27-9-B
26	110	=F1+L4-SP-29:2	0460-202-16141			27-9-B
27	104	=F1+L4-SP-21:2	0460-202-16141			27-9-B
28	116	=F1+L1-JS-0238:8	0460-202-16141			27-9-B
29	112	=F1+L1-JS-0240:6	0460-202-16141			27-9-B
30	115	=F1+L1-X-214:12B	0460-202-16141			27-9-B

-BP-001 — Powerbed Chassis Bulkhead

2 of 2

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
31	165	=F1+L1-BS-022:10	0460-202-16141			36-2-A
32	114	=F1+L1-X-214:12A	0460-202-16141			27-9-B
33					114017	
34	122	=F1+L1-JS-0240:7	0460-202-16141			29-9-A
35	129	=F1+L4-SP-20:1	0460-202-16141			29-9-B
36						
37						
38						
39	131	=F1+L1-JS-226:1	0460-202-16141			29-9-B
40	132	=F1+L1-JS-226:6	0460-202-16141			29-9-B
41	151	=F1+L4-SP-2:2	0460-202-16141			31-9-B
42	152	=F1+L4-SP-2:2	0460-202-16141			31-9-B
43	3	=F1+L1-X-208C2:1	0460-204-0490			06-4-A
44	229	=F1+L1-JS-0244:6	0460-202-16141			31-9-B
45					114017	
46	191	=F1+L4-SP-36:2	0460-202-16141			37-9-B
47	190	=F1+L4-SP-31:2	0460-202-16141			37-9-B
48	9	=F1+L1-X-208F1:1	0460-204-08141			08-1-E
49					114018	
50	210	=F1+L4-SP-41:2	0460-202-16141			39-9-A
51	208	=F1+L4-SP-45:2	0460-202-16141			39-9-A
52	188	=F1+L4-SP-47:2	0460-202-16141			37-9-B
53	186	=F1+L4-SP-46:2	0460-202-16141			37-9-B
54					114017	
55					114018	
56					114018	
57	216	=F1+L4-SP-10:1	0460-202-16141			41-6-A
58	21	=F1+L5-JS-253:12	0460-202-16141			
59					114017	
60					114017	

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C
SCALE 1:1		POWERBED HARNESS	SHEET NO. 20

-X-214 — Fuse and Relay Box — 1 of 2

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1A					12010300	
1B	90	=F1+L4-SP-53:2	12084201	12089679		19-9-A
1C	91	=F1+L4-SP-53:2	12084201	12089679		19-9-A
1D	92	=F1+L4-SP-53:2	12084201	12089679		19-9-A
1E	93	=F1+L4-SP-53:2	12084201	12089679		19-9-A
2A					12010300	
2B	64	=F1+L1-BP-001:12	12077411	12015323		19-9-A
2C	65	=F1+L1-BP-001:13	12077411	12015323		19-9-A
2D	66	=F1+L1-BP-001:14	12077411	12015323		19-9-A
2E	67	=F1+L1-BP-001:15	12077411	12015323		19-9-A
3A					12010300	
3B					12010300	
3C					12010300	
3D					12010300	
3E					12010300	
4A					12010300	
4B					12010300	
4C					12010300	
4D					12010300	
4E					12010300	
5A	73	=F1+L4-SP-50:2	12129493	12015323		19-9-A
5B	74	=F1+L4-SP-50:2	12129493	12015323		19-9-A
5C	5	=F1+L4-SP-50:2	12129493	12015323		19-9-A
5D					12010300	
5E					12010300	
6A	70	=F1+L4-SP-23:1	12129493	12015323		19-9-A
6B	71	=F1+L4-SP-24:1	12129493	12015323		19-9-A
6C	72	=F1+L4-SP-25:1	12129493	12015323		19-9-A
6D					12010300	
6E					12010300	

-X-214 — Fuse and Relay Box — 2 of 2

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
7A	106	=F1+L4-SP-52:2	12084201	12089679		19-9-A
7B					12010300	
7C					12010300	
7D					12010300	
7E					12010300	
8A	78	=F1+L1-JS-227:2	12084201	12089679		19-9-A
8B					12010300	
8C					12010300	
8D					12010300	
8E					12010300	
9A					12010300	
9B					12010300	
9C	233	=F1+L4-SP-55:2	12129493	12015323		10-9-A
9D	12	=F1+L4-SP-55:2	12129493	12015323		10-9-A
9E	77	=F1+L4-SP-52:2	12084201	12089679		19-9-A
10A					12010300	
10B					12010300	
10C	13	=F1+L4-SP-22:1	12129493	12015323		10-9-A
10D	10	=F1+L1-X-208H2:1	12129493	12015323		10-9-A
10E	79	=F1+L1-JS-228:2	12084201	12089679		19-9-A
11A	103	=F1+L4-SP-54:2	12084201	12089679		27-9-C
11B	232	=F1+L4-SP-54:2	12084201	12089679		27-9-C
11C	80	=F1+L4-SP-51:2	12084201	12089679		19-9-A
11D	81	=F1+L4-SP-51:2	12084201	12089679		
11E	82	=F1+L4-SP-51:2	12084201	12089679		19-9-A
12A	114	=F1+L1-BP-001:32	12084201	12089679		27-9-C
12B	115	=F1+L1-BP-001:30	12129493	12089679		27-9-C
12C	85	=F1+L1-JS-235C:H1	12129493	12015323		
12D	84	=F1+L1-JS-235B:H1	12129493	12015323		22-9-A
12E	83	=F1+L1-JS-235A:H1	12129493	12015323		22-9-A

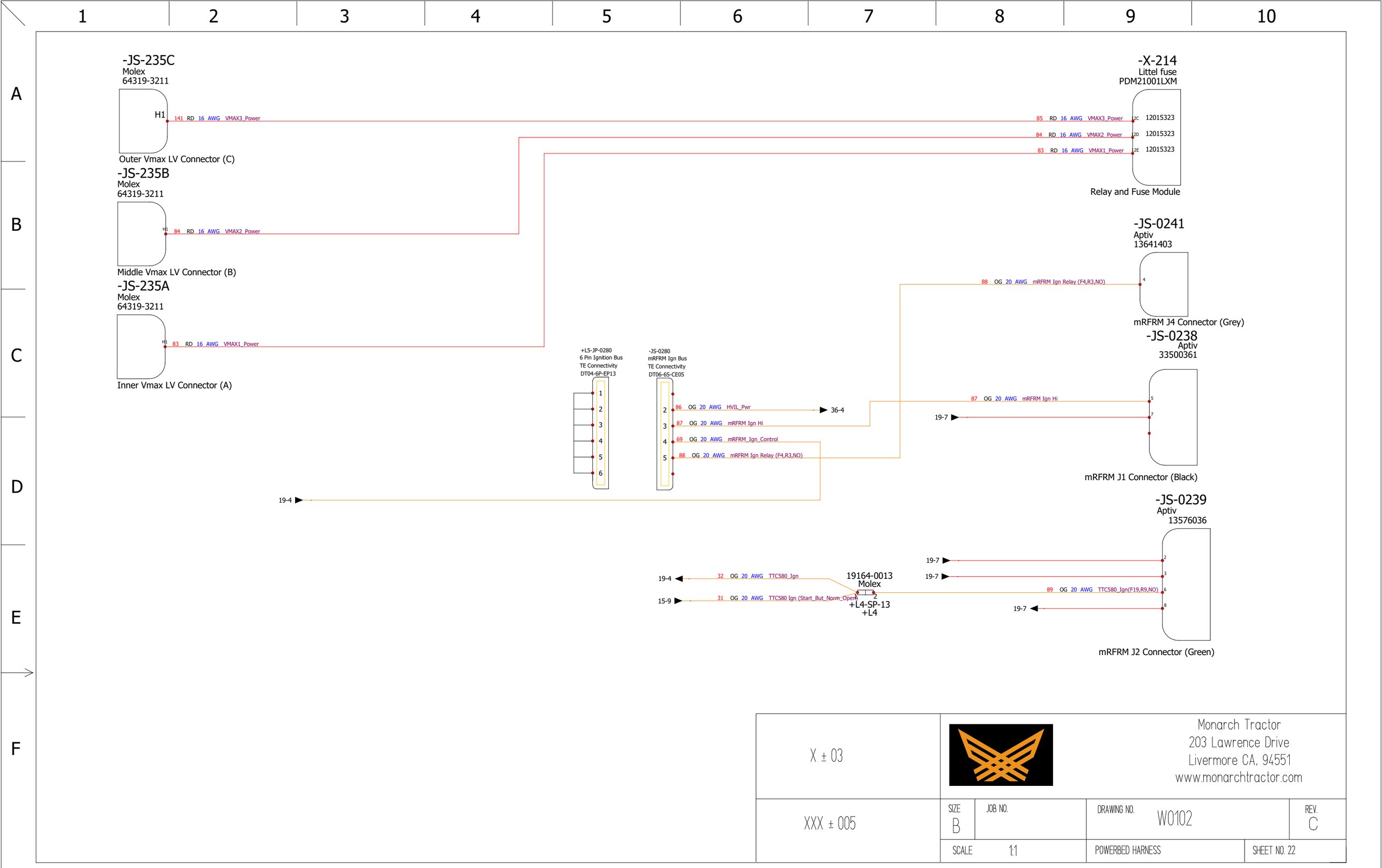
X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C

SCALE	POWERBED HARNESS	SHEET NO. 21
1:1		



X ± 03		Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com		
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1		POWERBED HARNESS	SHEET NO. 22

-JS-235A — Inner Vmax LV Connector (A)

Cap : 64319-1201

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
A1					643251010	
A2					643251010	
A3					643251010	
A4	192	=F1+L4-SP-34:2	64322-1039			39-2-C
B1					643251010	
B2					643251010	
B3					643251010	
B4	195	=F1+L4-SP-35:2	64322-1039			39-2-C
C1					643251010	
C2	18	=F1+L5-JS-254:3	64322-1039			13-2-C
C3					643251010	
C4	167	=F1+L1-JS-235B:D4	64322-1039			36-2-C
D1					643251010	
D2					643251010	
D3	124	=F1+L4-SP-27:2	64322-1039			29-4-F
D4	166	=F1+L1-BS-022:12	64322-1039			36-2-C
E1					643251010	
E2					643251010	
E3					643251010	
E4					643251010	
F1					643251010	
F2					643251010	
F3					643251010	
F4					643251010	
G1					643251023	
G2					643251023	
G3					643251023	
G4	19	=F1+L5-JS-254:11	64323-1029			13-2-C
H1	83	=F1+L1-X-214:12E	64323-1039			22-2-C
H2					643251023	
H3					643251023	
H4					643251023	

-JS-235B — Middle Vmax LV Connector (B)

Cap : 64319-1201

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
A1					643251010	
A2					643251010	
A3					643251010	
A4	203	=F1+L4-SP-39:1	64322-1039			39-2-E
B1					643251010	
B2	17	=F1+L5-JS-254:2	64322-1039			13-2-D
B3					643251010	
B4	201	=F1+L4-SP-40:1	64322-1039			39-2-E
C1					643251010	
C2					643251010	
C3					643251010	
C4	168	=F1+L1-JS-235C:D4	64322-1039			36-2-D
D1					643251010	
D2					643251010	
D3	125	=F1+L4-SP-26:1	64322-1039			29-5-F
D4	167	=F1+L1-JS-235A:C4	64322-1039			36-2-D
E1					643251010	
E2					643251010	
E3					643251010	
E4					643251010	
F1					643251010	
F2					643251010	
F3					643251010	
F4					643251010	
G1					643251023	
G2					643251023	
G3					643251023	
G4	20	=F1+L5-JS-254:12	64323-1029			13-2-D
H1	84	=F1+L1-X-214:12D	64323-1039			22-2-B
H2					643251023	
H3					643251023	
H4					643251023	

-JS-0241 — mRFRM J4 Connector (Grey)

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	106	=F1+L1-BS-022:11	10757690			27-2-B
2					54241629	
3					54241629	
4	88	=F1+L1-JS-0280:5	10757690			22-9-B
5					54241629	
6					54241629	
7	107	=F1+L4-SP-1:1	10762803			27-2-B
8	108	=F1+L4-SP-21:1	10757690			27-2-B
9					54241629	
10	109	=F1+L4-SP-29:1	10757690			27-2-B

+L4-SP-13 — TTC580_Ign(F19,R9,No) Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	31; 32	=F1+L1-JS-229:5; =F1+L1-BP-001:16		Splice		22-7-E
2	89	=F1+L1-JS-0239:6		Splice		

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 23

-JS-235C — Outer Vmax LV Connector (C)

Cap : 64319-1201

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
A1					643251010	
A2					643251010	
A3					643251010	
A4	198	=F1+L4-SP-39:2	64322-1039			39-2-F
B1					643251010	
B2					643251010	
B3					643251010	
B4	199	=F1+L4-SP-40:2	64322-1039			39-2-F
C1					643251010	
C2					643251010	
C3					643251010	
C4	86	=F1+L1-JS-0280:2	64322-1039			36-2-E
D1					643251010	
D2					643251010	
D3	126	=F1+L4-SP-26:2	64322-1039			29-6-F
D4	168	=F1+L1-JS-235B:C4	64322-1039			36-2-E
E1					643251010	
E2					643251010	
E3					643251010	
E4					643251010	
F1					643251010	
F2					643251010	
F3					643251010	
F4					643251010	
G1					643251023	
G2					643251023	
G3					643251023	
G4	16	=F1+L5-JS-254:1	64323-1029			13-2-E
H1	85	=F1+L1-X-214:12C	64323-1039			22-2-A
H2					643251023	
H3					643251023	
H4					643251023	

-JS-0280 — mRFRM Ign Bus

LOCK: W6S-P012

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1					114017-ZZ	
2	86	=F1+L1-JS-235C:C4	0462-201-16141			22-6-C
3	87	=F1+L1-JS-0238:5	0462-201-16141			22-6-C
4	69	=F1+L1-BP-001:18	0462-201-16141			22-6-C
5	88	=F1+L1-JS-0241:4	0462-201-16141			22-6-C
6					114017-ZZ	

-JS-0238 — mRFRM J1 Connector (Black)

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	120	=F1+L4-SP-30:2	10757690			27-9-D
2	176	=F1+L4-SP-37:1	13624983			37-2-C
3	174	=F1+L4-SP-38:1	13624983			37-2-C
4					54241629	
5	87	=F1+L1-JS-0280:3	13624983			22-9-C
6					54241629	
7	2	=F1+L4-SP-50:1	10762802			22-9-C
8	116	=F1+L1-BP-001:28	10757690			27-9-D
9	119	=F1+L4-SP-30:2	13624983			27-9-D
10					54241629	
11	95	=F1+L5-JS-254:9	13613157			25-10-C
12					54241629	
13					54241629	
14					54241629	

-JS-0239 — mRFRM J2 Connector (Green)

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	98	=F1+L1-BP-001:21	10757690			25-10-D
2	76	=F1+L4-SP-52:1	10757690			22-9-D
3	75	=F1+L4-SP-51:1	10757690			22-9-D
4	113	=F1+L4-SP-30:1	10757690			27-10-E
5	101	=F1+L4-SP-12:2	10762802			25-10-D
6	89	=F1+L4-SP-13:2	10757690			22-9-D
7					54241629	
8	231	=F1+L4-SP-53:1	10757690			22-9-D
9	128	=F1+L4-SP-27:1	10757690			29-9-E
10	97	=F1+L1-BS-022:1	10762803			25-10-D

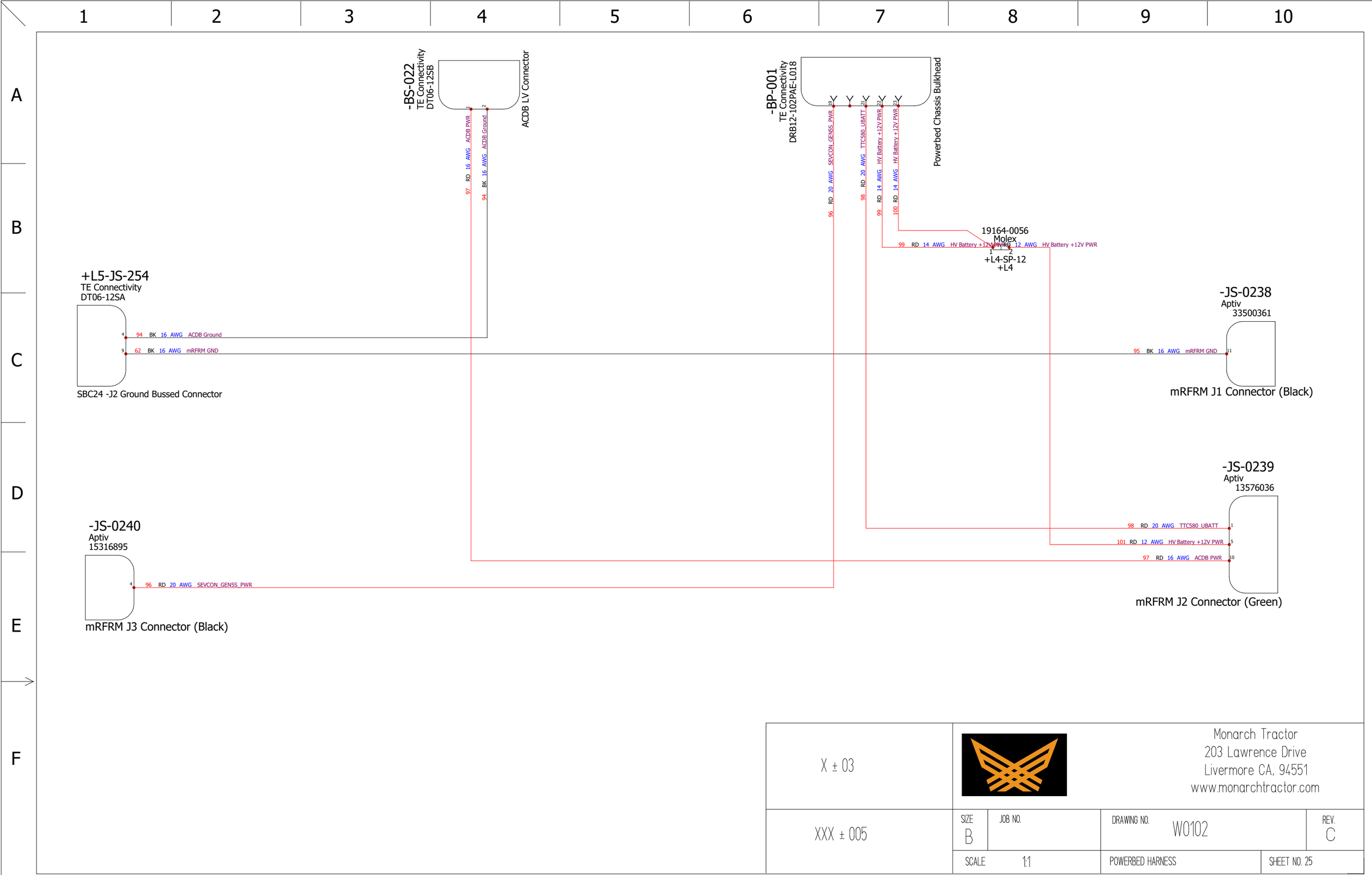
X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 24



X ± 03			Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com	
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1		POWERBED HARNESS	SHEET NO. 25

-JS-0240 — mRFRM J3 Connector (Black)

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	123	=F1+L4-SP-20:2	10757690			29-3-A
2					54241629	
3	121	=F1+L1-JS-229:2	10757690			29-3-A
4	96	=F1+L1-BP-001:19	10757690			25-2-D
5					54241629	
6	112	=F1+L1-BP-001:29	10762803			27-2-A
7	122	=F1+L1-BP-001:34	10757690			29-3-A
8					54241629	
9					54241629	
10					54241629	

+L4-SP-12 — HV BATTERY +12V PWR

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	99; 100	=F1+L1-BP-001:22; =F1+L1-BP-001:23				25-8-B
2	101	=F1+L1-JS-0239:5				

X ± 03

XXX ± 005

Monarch Tractor
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Livermore CA, 94551
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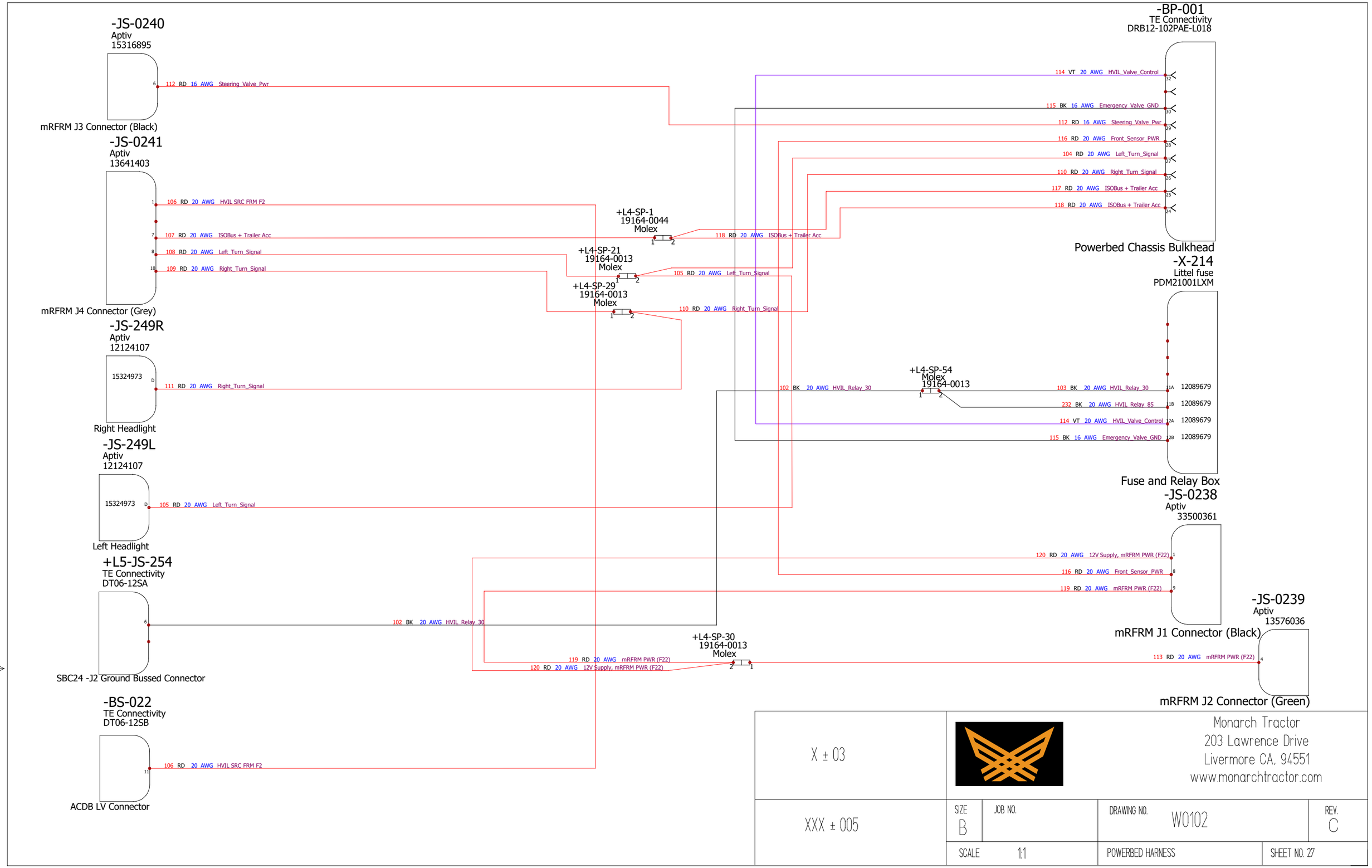
SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 26



X ± 03		Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com		
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1		POWERBED HARNESS	SHEET NO. 27

-JS-249L — Left Headlight

Lock: 12052850

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
A	158	=F1+L4-SP-17:2	12045773	15324973		34-2-F
B						
C	160	=F1+L4-SP-18:1	12045773	15324973		34-2-F
D	105	=F1+L4-SP-21:2	12045773	15324973		27-2-D
E	138	=F1+L5-JS-255:3	12045773	15324973		34-2-F
F	162	=F1+L4-SP-19:1	12045773	15324973		34-2-F

-JS-249R — Right Headlight

Lock: 12052850

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
A	157	=F1+L4-SP-17:2	12045773	15324973		34-2-D
B					12059168	
C	159	=F1+L4-SP-18:1	12045773	15324973		34-2-D
D	111	=F1+L4-SP-29:2	12045773	15324973		27-2-C
E	139	=F1+L5-JS-255:11	12045773	15324973		34-2-D
F	161	=F1+L4-SP-19:1	12045773	15324973		34-2-D

+L4-SP-21 — Left Turn Signal Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	108	=F1+L1-JS-0241:8		Splice		27-5-B
2	104; 105	=F1+L1-BP-001:27; =F1+L1-JS-249L:D		Splice		

+L4-SP-1 — ISOBus + Trailer Acc

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	107	=F1+L1-JS-0241:7		Splice		27-6-B
2	117; 118	=F1+L1-BP-001:25; =F1+L1-BP-001:24				

+L4-SP-29 — Right Turn Signal

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	109	=F1+L1-JS-0241:10		Splice		27-5-C
2	110; 111	=F1+L1-BP-001:26; =F1+L1-JS-249R:D		Splice		

+L4-SP-30 — mRFRM Splice (F22)

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
2	119; 120	=F1+L1-JS-0238:9; =F1+L1-JS-0238:1		Splice		27-6-E
1	113	=F1+L1-JS-0239:4		Splice		

X ± 03

XXX ± 005

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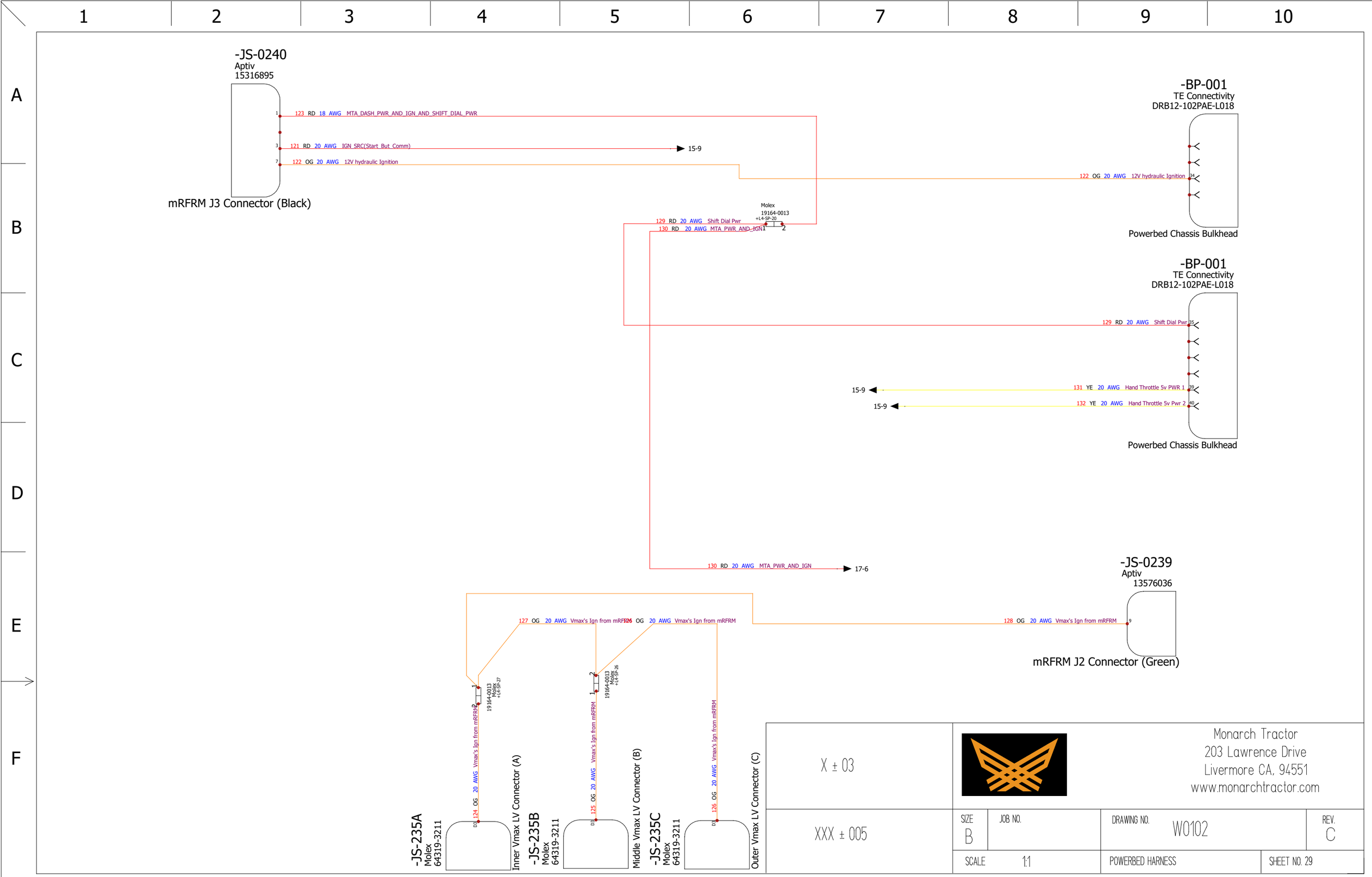
www.monarchtractor.com

SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C

SCALE			SHEET NO. 28
1:1		POWERBED HARNESS	



X ± 03	Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com		
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102 / REV. C
	SCALE 1:1	POWERBED HARNESS	SHEET NO. 29

+L4-SP-20 — MTA_PWR_SPLICE

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	129; 130	=F1+L1-BP-001:35; =F1+L4-SP-42:1		Splice		29-6-B
2	123	=F1+L1-JS-0240:1		Splice		

+L4-SP-26 — Vmax's Ignition Splice In-Mid

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
2	126; 127	=F1+L1-JS-235C:D3; =F1+L4-SP-27:1		Splice		29-5-E
1	125	=F1+L1-JS-235B:D3		Splice		

+L4-SP-27 — Vmax's Ignition Splice Mid-Out

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	127; 128	=F1+L4-SP-26:2; =F1+L1-JS-0239:9		Splice		29-4-E
2	124	=F1+L1-JS-235A:D3		Splice		

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C

SCALE			SHEET NO. 30
1:1		POWERBED HARNESS	

-JS-0245
TE Connectivity
DT06-12SB

6 141 RD 14 AWG HOC FAN PWR [(4,5,6),(DO6)]

IX3212 J4 (BLACK)

-JS-0245
TE Connectivity
DT06-12SB

1 142 BU 16 AWG Running Lights (DO1) → 34-8
2 143 BK 16 AWG Low Beams (DO2) → 34-8
3 144 GN 16 AWG High Beams (DO3) → 34-8
5 145 RD 20 AWG Trailer Brake Taillight (DO5)
12 135 BK 20 AWG IX3212 ID Select (DI1)

IX3212 J4 (BLACK)

+L4-SP-2
19164-0013
Molex
1 2

151 RD 20 AWG Trailer_Taillight(DO5)
152 RD 20 AWG Trailer Brake Light(DO5)

-JS-0244
TE Connectivity
DT06-12SA

34-9 ← 146 RD 16 AWG USB Outlet & 12V Outlet (DO9) 5
229 RD 16 AWG PE_Pump_PWR (DO10) 6

IX3212 J3 (GRAY)

-BP-001
TE Connectivity
DRB12-102PAE-L018

151 RD 20 AWG Trailer_Taillight(DO5) 41
152 RD 20 AWG Trailer Brake Light(DO5) 42
229 RD 16 AWG PE_Pump_PWR (DO10) 44

Powerbed Chassis Bulkhead

+L5-JS-254
TE Connectivity
DT06-12SA

7 135 BK 20 AWG IX3212 ID Select (DI1)

SBC24 -J2 Ground Bussed Connector

-BS-0231
TE Connectivity
DT06-12SA

133 RD 14 AWG HOC FAN PWR [(1,2,3),(DO11)] 1
136 BK 16 AWG HOC FAN GND (1,2,3) 2
140 BK 16 AWG HOC FAN GND (4,5,6) 10
141 RD 14 AWG HOC FAN PWR [(4,5,6),(DO6)] 11

HOC FAN and HRI Bulkhead

-JS-0247
Deutsch
DTP06-2S

2 133 RD 14 AWG HOC FAN PWR [(1,2,3),(DO11)]
1 134 RD 14 AWG PEC FAN PWR (DO12)

IX3212 J6 (DO11,DO12)

+L4-SP-3
19164-0044
Molex
1 2

Molex
1 2
19164-0044
+L4-SP-4

-BS-0221
TE Connectivity
DT06-12SA

149 RD 16 AWG PE FAN 1 & 2 PWR 1
148 BK 16 AWG PE FAN GND 2
147 BK 16 AWG PE FAN GND 10
150 RD 16 AWG PE FAN 3&4 PWR 11

PEC Fan and HRI Bulkhead

+L5-JS-255
TE Connectivity
DT06-12SA

1 136 BK 16 AWG HOC FAN GND (1,2,3)
2 137 BK 14 AWG PEC FAN GND
3 138 BK 16 AWG Left Head Light GND → 34-4
11 139 BK 16 AWG Right Head Light GND → 34-4
12 140 BK 16 AWG HOC FAN GND (4,5,6)

SBC-12 J1 Ground Bussed Connector

X ± 03	Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com			
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1	POWERBED HARNESS		SHEET NO. 31

+L5-JS-255 — SBC-12 J1 Ground Bussed Connector

W-12S

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	136	=F1+L1-BS-0231:2				31-2-E
2	137	=F1+L4-SP-4:1	1062-16-0122			31-2-E
3	138	=F1+L1-JS-249L:E	0462-201-16141			31-2-E
4					114017-ZZ	
5					114017-ZZ	
6					114017-ZZ	
7					114017-ZZ	
8					114017-ZZ	
9					114017-ZZ	
10			0462-201-16141			
11	139	=F1+L1-JS-249R:E	0462-201-16141			31-2-E
12	140	=F1+L1-BS-0231:10	0462-201-16141			31-2-E

-JS-0245 — IX3212 J4 (BLACK)

LOCK: W-12S

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	142	=F1+L4-SP-18:2	0462-201-16141			31-2-B
2	143	=F1+L4-SP-17:1	0462-201-16141			31-2-B
3	144	=F1+L4-SP-19:2	0462-201-16141			31-2-B
4	163	=F1+L5-JS-021:1	0462-201-16141			34-3-A
5	145	=F1+L4-SP-2:1	0462-201-16141			31-2-B
6	141	=F1+L1-BS-0231:11	0462-209-16141			31-2-A
7					114017-ZZ	
8					114017-ZZ	
9					114017-ZZ	
10					114017-ZZ	
11					114017-ZZ	
12	135	=F1+L5-JS-254:7	0462-201-16141			31-2-B

-JS-0244 — IX3212 J3 (GRAY)

LOCK: W-12S

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1					114017-ZZ	
2					114017-ZZ	
3					114017-ZZ	
4	220	=F1+L4-SP-10:2	0462-201-16141			41-9-A
5	146	=F1+L4-SP-15:2	0462-201-16141			31-9-A
6	229	=F1+L1-BP-001:44	0462-209-16141			31-9-A
7					114017-ZZ	
8					114017-ZZ	
9					114017-ZZ	
10					114017-ZZ	
11					114017-ZZ	
12					114017-ZZ	

+L4-SP-2 — Trailer Brake and Tailight Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	145	=F1+L1-JS-0245:5				31-5-C
2	151; 152	=F1+L1-BP-001:41; =F1+L1-BP-001:42				

+L4-SP-3 — PEC FAN's PWR Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	134	=F1+L1-JS-0247:1				31-7-E
2	149; 150	=F1+L1-BS-0221:1; =F1+L1-BS-0221:11				

+L4-SP-4 — PEC FAN's GND Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	137	=F1+L5-JS-255:2				31-8-E
2	147; 148	=F1+L1-BS-0221:10; =F1+L1-BS-0221:2				

-JS-0247 — IX3212 J6 (DO11,DO12)

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
2	133	=F1+L1-BS-0231:1	0462-203-04141			31-2-D
1	134	=F1+L4-SP-3:1	0462-203-04141			31-2-D

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
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SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C

SCALE			SHEET NO. 32
1:1		POWERBED HARNESS	

-BS-0221 PEC Fan and HRI Bulkhead

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	149	=F1+L4-SP-3:2	0462-201-16141			31-9-D
2	148	=F1+L4-SP-4:2	0462-201-16141			31-9-D
3	227	=F1+L4-SP-8:2	0462-201-16141			41-9-B
4	172	=F1+L4-SP-28:1	0462-201-16141			37-2-A
5	224	=F1+L4-SP-6:1	0462-201-16141			41-9-B
6					114017-ZZ	
7					114017-ZZ	
8	226	=F1+L4-SP-7:2	0462-201-16141			41-9-B
9	170	=F1+L4-SP-5:1	0462-201-16141			37-2-A
10	147	=F1+L4-SP-4:2	0462-201-16141			31-9-D
11	150	=F1+L4-SP-3:2	0462-201-16141			31-9-D
12	228	=F1+L4-SP-8:2	0462-201-16141			41-9-B

-BS-0231 HOC FAN and HRI Bulkhead

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	133	=F1+L1-JS-0247:2	0462-209-16141			31-9-C
2	136	=F1+L5-JS-255:1	0462-201-16141			31-9-C
3	222	=F1+L4-SP-9:2	0462-201-16141			41-9-C
4	177	=F1+L4-SP-33:1	0462-201-16141			37-2-B
5	223	=F1+L4-SP-6:2	0462-201-16141			41-9-C
6					114017-ZZ	
7					114017-ZZ	
8	225	=F1+L4-SP-7:2	0462-201-16141			41-9-C
9	230	=F1+L4-SP-32:1	0462-201-16141			37-2-B
10	140	=F1+L5-JS-255:12	0462-201-16141			31-9-C
11	141	=F1+L1-JS-0245:6	0462-209-16141			31-9-C
12	221	=F1+L4-SP-9:2	0462-201-16141			41-9-C

X ± 03

XXX ± 005

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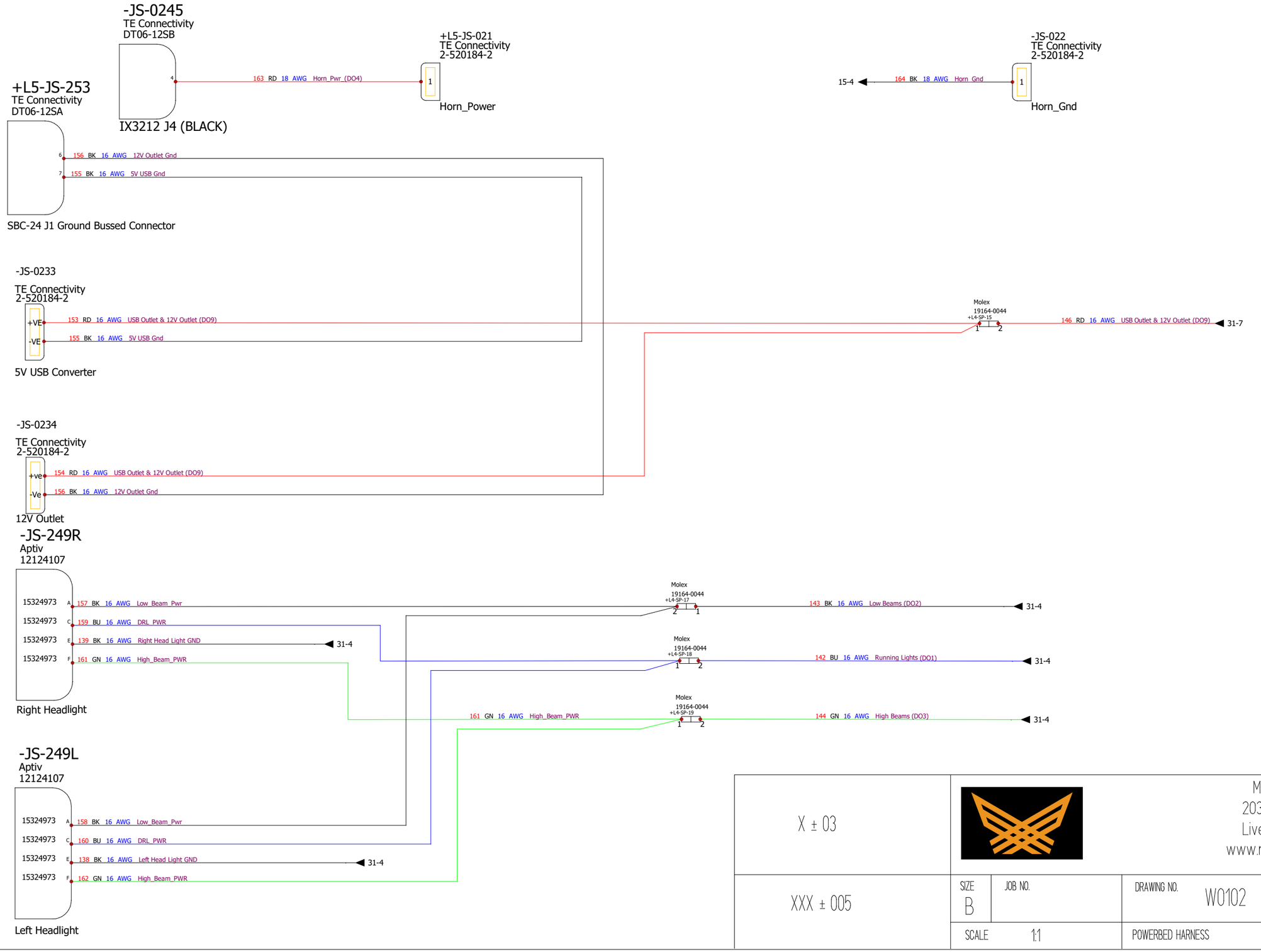
SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 33


-JS-0245
TE Connectivity
DT06-12SB
4
163 RD 18 AWG Horn_Pwr (DO4)
+L5-JS-021
TE Connectivity
2-520184-2
1
Horn_Power
+L5-JS-253
TE Connectivity
DT06-12SA
IX3212 J4 (BLACK)
15-4
164 BK 18 AWG Horn_Gnd
-JS-022
TE Connectivity
2-520184-2
1
Horn_Gnd
6
156 BK 16 AWG 12V Outlet Gnd
7
155 BK 16 AWG 5V USB Gnd
SBC-24 J1 Ground Bussed Connector
-JS-0233
TE Connectivity
2-520184-2
+VE
-VE
153 RD 16 AWG USB Outlet & 12V Outlet (DO9)
155 BK 16 AWG 5V USB Gnd
5V USB Converter
Molex
19164-0044
+L4-SP-15
1
2
146 RD 16 AWG USB Outlet & 12V Outlet (DO9)
31-7
-JS-0234
TE Connectivity
2-520184-2
+ve
-Ve
154 RD 16 AWG USB Outlet & 12V Outlet (DO9)
156 BK 16 AWG 12V Outlet Gnd
12V Outlet
-JS-249R
Aptiv
12124107
15324973
A
157 BK 16 AWG Low_Beam_Pwr
C
159 BU 16 AWG DRL_PWR
E
139 BK 16 AWG Right Head Light GND
31-4
F
161 GN 16 AWG High_Beam_PWR
Right Headlight
Molex
19164-0044
+L4-SP-17
2
1
143 BK 16 AWG Low Beams (DO2)
31-4
Molex
19164-0044
+L4-SP-18
1
2
142 BU 16 AWG Running Lights (DO1)
31-4
Molex
19164-0044
+L4-SP-19
1
2
161 GN 16 AWG High_Beam_PWR
144 GN 16 AWG High Beams (DO3)
31-4
-JS-249L
Aptiv
12124107
15324973
A
158 BK 16 AWG Low_Beam_Pwr
C
160 BU 16 AWG DRL_PWR
E
138 BK 16 AWG Left Head Light GND
31-4
F
162 GN 16 AWG High_Beam_PWR
Left Headlight
X ± 03
XXX ± 005
Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com
SIZE
B
JOB NO.
DRAWING NO.
W0102
REV.
C
SCALE
1:1
POWERBED HARNESS
SHEET NO. 34

-JS-0234 — 12V Outlet

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
-Ve	156	=F1+L5-JS-253:6	2-520184-2			34-2-D
+ve	154	=F1+L4-SP-15:1	2-520184-2			34-2-D

+L5-JS-021 — Horn_Power

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	163	=F1+L1-JS-0245:4				34-4-A

-JS-022 — Horn_Gnd

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	164	=F1+L5-JS-253:3				34-8-A

-JS-0233 — 5V USB Converter

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
-VE	155	=F1+L5-JS-253:7	2-520184-2			34-2-C
+VE	153	=F1+L4-SP-15:1	2-520184-2			34-2-C

+L4-SP-15 — USB Outlet & 12V Outlet (DO9) Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	153; 154	=F1+L1-JS-0233:+VE; =F1+L1-JS-0234:+ve				34-8-C
2	146	=F1+L1-JS-0244:5				

+L4-SP-18 — Running Lights (DO1) Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	159; 160	=F1+L1-JS-249R:C; =F1+L1-JS-249L:C				34-6-E
2	142	=F1+L1-JS-0245:1				

+L4-SP-17 — Low Beams (DO2) Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
2	157; 158	=F1+L1-JS-249R:A; =F1+L1-JS-249L:A				34-6-D
1	143	=F1+L1-JS-0245:2				

+L4-SP-19 — High Beams (DO3) Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	161; 162	=F1+L1-JS-249R:F; =F1+L1-JS-249L:F				34-6-E
2	144	=F1+L1-JS-0245:3				

X ± 03

XXX ± 005

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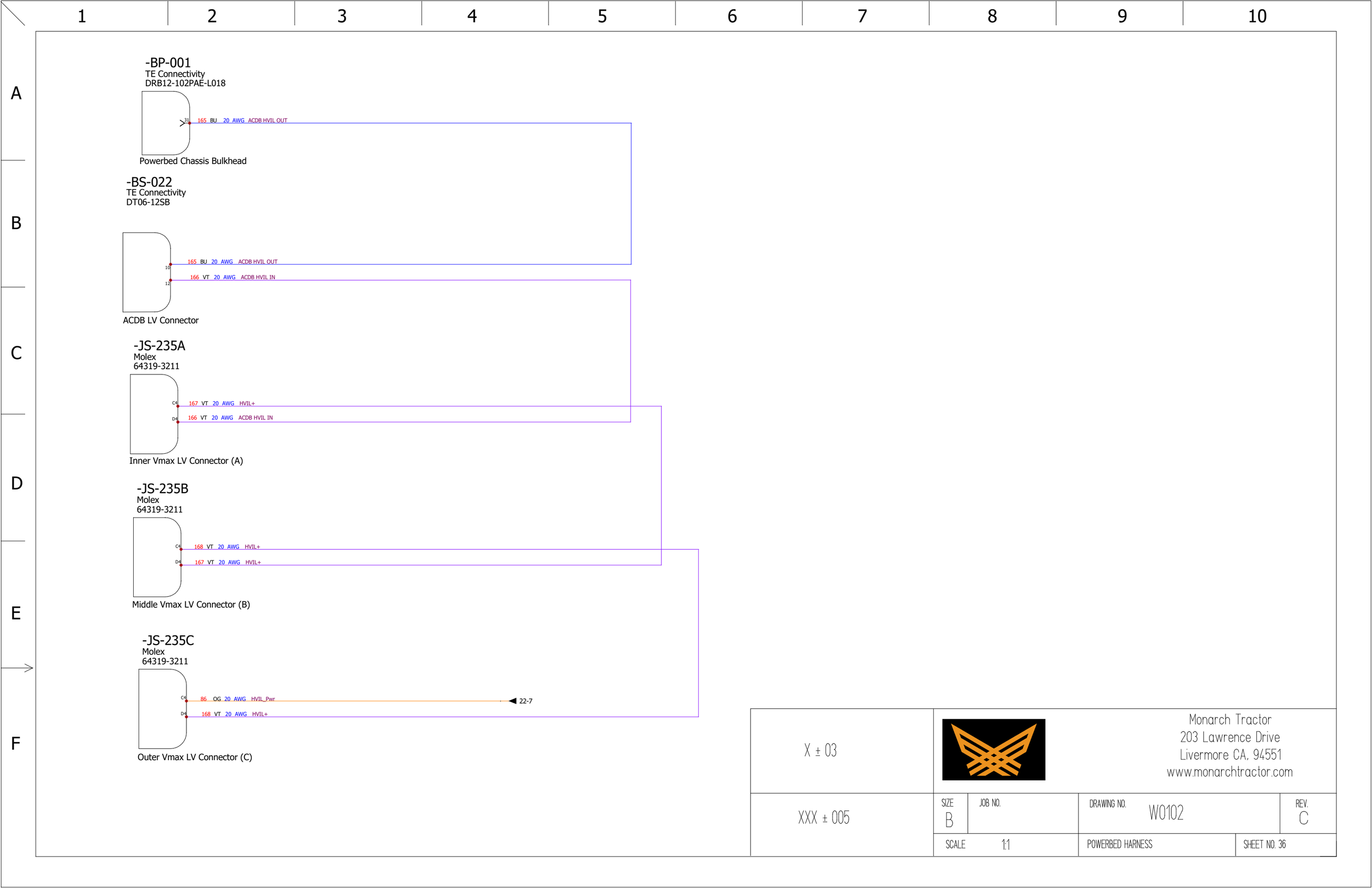
SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C
SCALE 1:1		POWERBED HARNESS	SHEET NO. 35


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
-BP-001
TE Connectivity
DRB12-102PAE-L018
31
165 BU 20 AWG ACDB HVIL OUT
Powerbed Chassis Bulkhead
-BS-022
TE Connectivity
DT06-12SB
10
12
165 BU 20 AWG ACDB HVIL OUT
166 VT 20 AWG ACDB HVIL IN
ACDB LV Connector
-JS-235A
Molex
64319-3211
C4
D4
167 VT 20 AWG HVIL+
166 VT 20 AWG ACDB HVIL IN
Inner Vmax LV Connector (A)
-JS-235B
Molex
64319-3211
C4
D4
168 VT 20 AWG HVIL+
167 VT 20 AWG HVIL+
Middle Vmax LV Connector (B)
-JS-235C
Molex
64319-3211
C4
D4
86 OG 20 AWG HVIL_Pwr
22-7
168 VT 20 AWG HVIL+
Outer Vmax LV Connector (C)
X ± 03
XXX ± 005
Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com
SIZE
B
JOB NO.
DRAWING NO.
W0102
REV.
C
SCALE
1:1
POWERBED HARNESS
SHEET NO. 36

NOTE: PLEASE CONNECT THE JP-0214 CONNECTOR TO JS-0214 BEFORE SHIPPING THE HARNESS

120 ohms CAN4 termination 120 Ohm CAN 4 Termination

-BS-0221
TE Connectivity
DT06-12SA
DT PLUG ASM

-BS-0231
TE Connectivity
DT06-12SA
DT PLUG ASM

-JS-0238
Aptiv
33500361
14W FM HSING BLK 1.5MM TERM SZ

-JS-0246
TE Connectivity
DT06-12SC
DT PLUG ASM

+L5-JP-0214 JS-0214
Deutsch DTM04-2P-P006
Deutsch DTM06-2S

-BP-001
TE Connectivity
DRB12-102PAE-L018
Powerbed Chassis Bulkhead

Molex 19164-0013: +L4-SP-5, +L4-SP-28, +L4-SP-31, +L4-SP-32, +L4-SP-33, +L4-SP-36, +L4-SP-37, +L4-SP-38, +L4-SP-46, +L4-SP-47

X ± 03	Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com
XXX ± 005	SIZE B · JOB NO. · DRAWING NO. W0102 · REV. C
	SCALE 1:1 · POWERBED HARNESS · SHEET NO. 37

-JS-0246

IX3212 J5 (GREEN)

LOCK: W-12S

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	173	=F1+L4-SP-38:1	0462-201-20141			37-2-D
2					114017-ZZ	
3					114017-ZZ	
4					114017-ZZ	
5					114017-ZZ	
6					114017-ZZ	
7					114017-ZZ	
8					114017-ZZ	
9					114017-ZZ	
10					114017-ZZ	
11					114017-ZZ	
12	175	=F1+L4-SP-37:1	0462-201-20141			37-2-D

-JS-0212

120 Ohm CAN 2 Termination

LOCK: WM-2S

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	27	=F1+L4-SP-48:2	0460-202-20141			15-2-E
2	25	=F1+L4-SP-49:2	0460-202-20141			15-2-E

-JS-0214

120 Ohm CAN 4 Termination

LOCK: WM-2S

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	187	=F1+L4-SP-46:2	0460-202-20141			37-7-A
2	189	=F1+L4-SP-47:2	0460-202-20141			37-7-A

X ± 03

XXX ± 005

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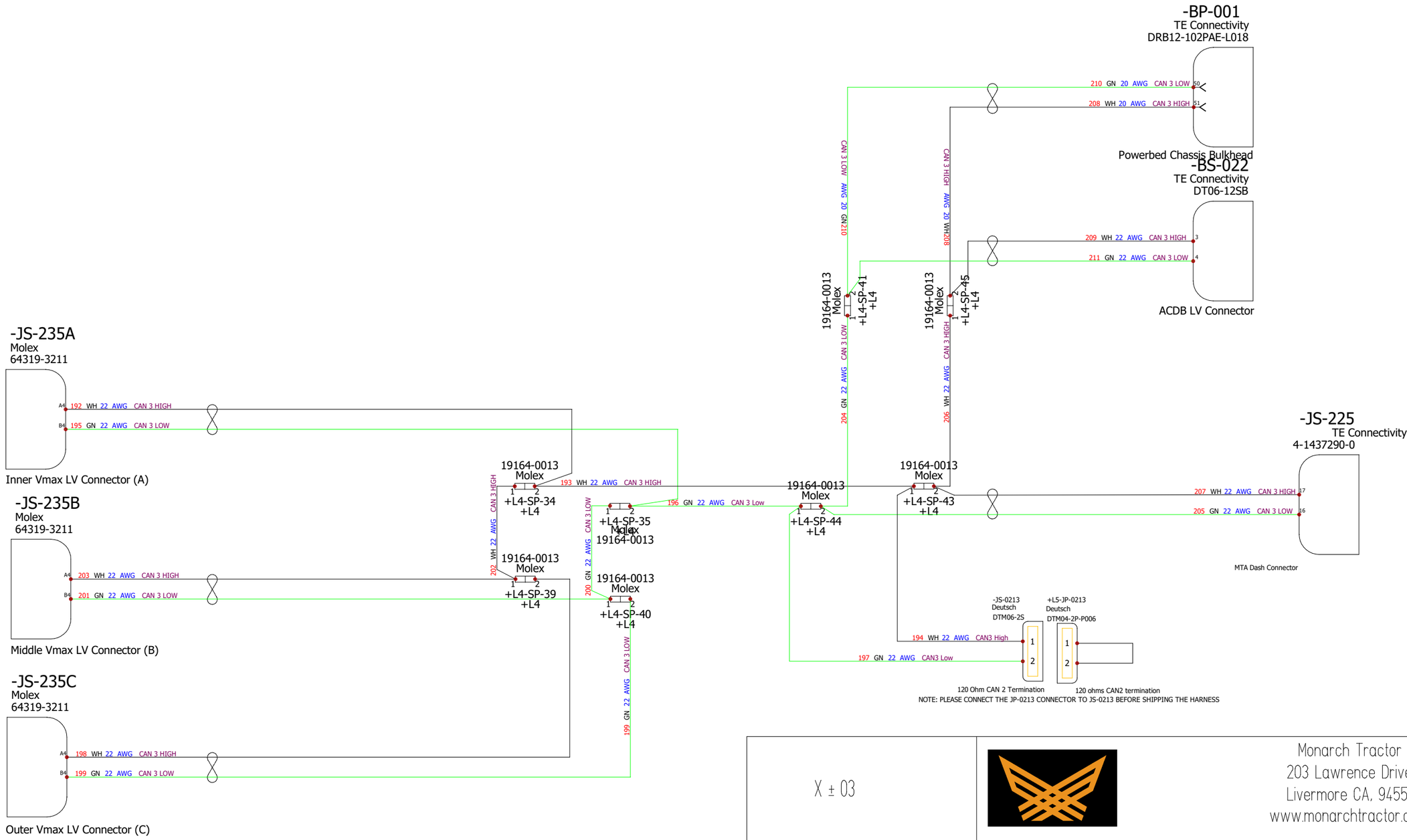
SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 38



X ± 03	Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com			
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1	POWERBED HARNESS	SHEET NO. 39	

+L4-SP-41 — CAN 3 Low Splice 1

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	204	=F1+L4-SP-44:2		Splice		39-7-C
2	210; 211	=F1+L1-BP-001:50; =F1+L1-BS-022:4		Splice		

+L4-SP-44 — CAN 3 Low Splice 2

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	196; 197	=F1+L4-SP-35:2; =F1+L1-JS-0213:2		Splice		39-7-D
2	204; 205	=F1+L4-SP-41:1; =F1+L1-JS-225:16		Splice		

+L4-SP-35 — CAN 3 Low Splice 3

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	200	=F1+L4-SP-40:1		Splice		39-5-D
2	195; 196	=F1+L1-JS-235A:B4; =F1+L4-SP-44:1		Splice		

+L4-SP-40 — CAN 3 Low Splice 4

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	200; 201	=F1+L4-SP-35:1; =F1+L1-JS-235B:B4		Splice		39-5-E
2	199	=F1+L1-JS-235C:B4		Splice		

-JS-0213 — 120 Ohm CAN 2 Termination

LOCK: WM-2S

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	194	=F1+L4-SP-43:1	0460-202-20141			39-8-E
2	197	=F1+L4-SP-44:1	0460-202-20141			39-8-E

+L4-SP-45 — CAN 3 High Splice 1

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	206	=F1+L4-SP-43:2		Splice		39-8-C
2	208; 209	=F1+L1-BP-001:51; =F1+L1-BS-022:3		Splice		

+L4-SP-43 — CAN 3 High Splice 2

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	193; 194	=F1+L4-SP-34:2; =F1+L1-JS-0213:1		Splice		39-7-D
2	206; 207	=F1+L4-SP-45:1; =F1+L1-JS-225:17		Splice		

+L4-SP-34 — CAN 3 High Splice 3

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	202	=F1+L4-SP-39:1		Splice		39-5-D
2	192; 193	=F1+L1-JS-235A:A4; =F1+L4-SP-43:1		Splice		

+L4-SP-39 — CAN 3 High Splice 4

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	202; 203	=F1+L4-SP-34:1; =F1+L1-JS-235B:A4		Splice		39-5-E
2	198	=F1+L1-JS-235C:A4		Splice		

X ± 03

XXX ± 005

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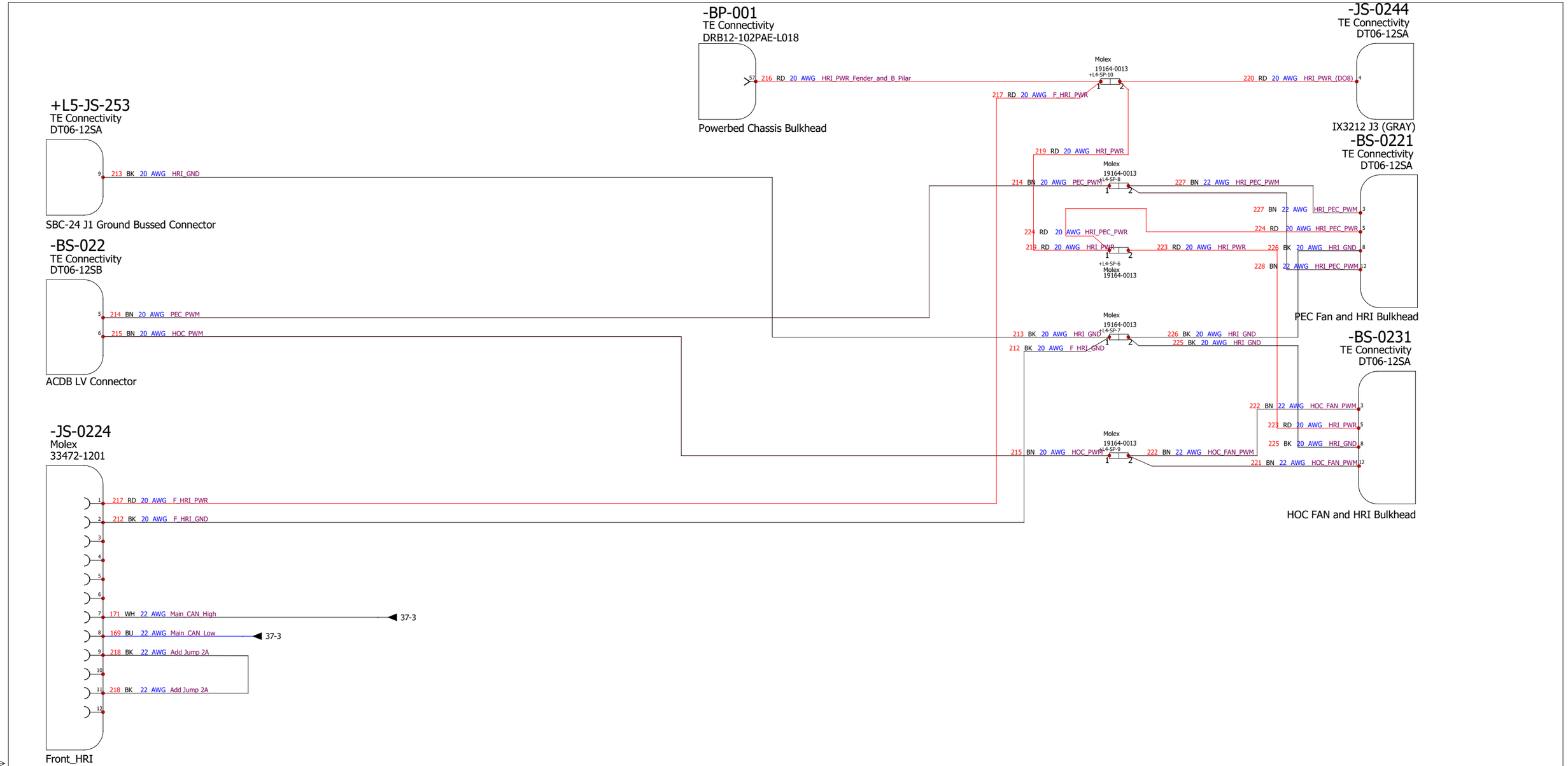
Livermore CA, 94551
www.monarchtractor.com

SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C

SCALE		POWERBED HARNESS	SHEET NO. 40
	1:1		



X ± 03	Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com			
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1	POWERBED HARNESS	SHEET NO. 41	

-BS-022 — ACDB LV Connector

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	97	=F1+L1-JS-0239:10	0460-202-16141			25-4-A
2	94	=F1+L5-JS-254:4	0460-202-16141			25-4-A
3	209	=F1+L4-SP-45:2	0460-202-16141			39-9-B
4	211	=F1+L4-SP-41:2	0460-202-16141			39-9-B
5	214	=F1+L4-SP-8:1	0460-202-16141			41-1-B
6	215	=F1+L4-SP-9:1	0460-202-16141			41-1-B
7					0413-204-16141	
8					0413-204-16141	
9					0413-204-16141	
10	165	=F1+L1-BP-001:31	0460-202-16141			36-2-B
11	106	=F1+L1-JS-0241:1	0460-202-16141			27-2-F
12	166	=F1+L1-JS-235A:D4	0460-202-16141			36-2-B

-JS-0224 — Front_HRI

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	217	=F1+L4-SP-10:1	330122002			41-1-C
2	212	=F1+L4-SP-7:1	330122002			41-1-C
3					343450001	41-1-C
4					343450001	41-1-C
5					343450001	41-1-C
6					343450001	41-1-C
7	171	=F1+L4-SP-28:1	330122003			41-1-C
8	169	=F1+L4-SP-5:1	330122003			41-1-C
9	218	=F1+L1-JS-0224:11	330122003			41-1-C
10					343450001	41-1-C
11	218	=F1+L1-JS-0224:9	330122003			41-1-C
12					343450001	41-1-C

+L4-SP-6 — HRI_PWR_Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	219; 224	=F1+L4-SP-10:2; =F1+L1-BS-0221:5		Splice		41-8-B
2	223	=F1+L1-BS-0231:5		Splice		

+L4-SP-7 — HRI_GND_Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	212; 213	=F1+L1-JS-0224:2; =F1+L5-JS-253:9		Splice		41-8-B
2	225; 226	=F1+L1-BS-0231:8; =F1+L1-BS-0221:8		Splice		

+L4-SP-8 — HRI_PEC_PWM_Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	214	=F1+L1-BS-022:5		Splice		41-8-A
2	227; 228	=F1+L1-BS-0221:3; =F1+L1-BS-0221:12		Splice		

+L4-SP-9 — HOC_PWM_PWM_Splice

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	215	=F1+L1-BS-022:6		Splice		41-8-C
2	221; 222	=F1+L1-BS-0231:12; =F1+L1-BS-0231:3		Splice		

+L4-SP-10 — HRI_PWR_Splice_1

Pin	Wire ID	Destination	Terminal	Ter. Seal	Cavity Plug	Cross-ref
1	216; 217	=F1+L1-BP-001:57; =F1+L1-JS-0224:1		Splice		41-8-A
2	219; 220	=F1+L4-SP-6:1; =F1+L1-JS-0244:4		Splice		

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C

SCALE			SHEET NO.
1:1	POWERBED HARNESS		42

1/0 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
1	-JS-232A1	1	-X-0210A1	1	RD	1/0 (AWG)	1029.19	DCDC Output	W0102
							1029.19		

4 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
7	-G2	1	-JS-242	1	BK	4 (AWG)	284.82	Ground (-)	W0102
3	-X-208C2	1	-BP-001	43	RD	4 (AWG)	981.64	Roof_Power	W0102
4	-X-208D2	1	-JS-243	1	RD	4 (AWG)	620.33	Power (+)	W0102
							1886.79		

8 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
9	-BP-001	48	-X-208F1	1	RD	8 (AWG)	1010.35	ISOBus_Power_60A	W0102
							1010.35		

12 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
8	-BP-001	1	-X-208H1	1	RD	12 (AWG)	974.14	ISOBus_PWR_ECU	W0102
101	-SP-12	2	-JS-0239	5	RD	12 (AWG)	746.19	HV Battery +12V PWR	W0102
2	-SP-50	1	-JS-0238	7	RD	12 (AWG)	0	TTC580_12V (F28)	W0102
							1720.33		

12 AWG-41096

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
15	-JS-232B1	1	-F12	1	RD	12 (AWG)	95.23	Vmax_Res_2_Input	W0102
							95.23		

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
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SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 43

14 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
141	-BS-0231	11	-JS-0245	6	RD	14 (AWG)	939.85	HOC FAN PWR [(4,5,6),(DO6)]	W0102
133	-BS-0231	1	-JS-0247	2	RD	14 (AWG)	1040.52	HOC FAN PWR [(1,2,3),(DO11)]	W0102
13	-SP-22	1	-X-214	10C	RD	14 (AWG)	908.92	Vmax_Res_2_Input	W0102
62	-SP-23	2	-BP-001	2	RD	14 (AWG)	168.29	TTC580_Power_1	W0102
63	-SP-23	2	-BP-001	3	RD	14 (AWG)	165.67	TTC580_Power_2	W0102
70	-SP-23	1	-X-214	6A	RD	14 (AWG)	922.82	TTC580_12V_Fused	W0102
61	-SP-24	2	-BP-001	4	RD	14 (AWG)	190.59	TTC580_Power_3	W0102
60	-SP-24	2	-BP-001	5	RD	14 (AWG)	190.54	TTC580_Power_4	W0102
71	-SP-24	1	-X-214	6B	RD	14 (AWG)	900.61	TTC580_12V_Fused	W0102
58	-SP-25	2	-BP-001	6	RD	14 (AWG)	208.12	TTC580_Power_5	W0102
59	-SP-25	2	-BP-001	7	RD	14 (AWG)	210.67	TTC580_Power_6	W0102
72	-SP-25	1	-X-214	6C	RD	14 (AWG)	866.77	TTC580_12V_Fused	W0102
134	-SP-3	1	-JS-0247	1	RD	14 (AWG)	1646.44	PEC FAN PWR (DO12)	W0102
99	-SP-12	1	-BP-001	22	RD	14 (AWG)	245.28	HV Battery +12V PWR	W0102
100	-SP-12	1	-BP-001	23	RD	14 (AWG)	243.06	HV Battery +12V PWR	W0102
73	-SP-50	2	-X-214	5A	RD	14 (AWG)	0	TTC580_12V	W0102
74	-SP-50	2	-X-214	5B	RD	14 (AWG)	0	TTC580_12V	W0102
5	-SP-50	2	-X-214	5C	RD	14 (AWG)	0	TTC580_12V	W0102
10	-X-214	10D	-X-208H2	1	RD	14 (AWG)	707.37	Vmax_Res_1_Input	W0102
233	-SP-55	2	-X-214	9C	BK	14 (AWG)	0	VX_RES_2_OUTPUT	W0102
12	-SP-55	2	-X-214	9D	BK	14 (AWG)	0	VX_RES_1_Output_To_GND	W0102
							9555.52		

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
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SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 44

14 AWG-41097

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
14	-F12	2	-SP-22	2	RD	14 (AWG)	116.18	Vmax_Res_2_Input	W0102
							116.18		

14 AWG-41098

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
11	-SP-55	1	-JS-254	5	BK	14 (AWG)	0	VX_RES_1_Output_To_GND	W0102
137	-SP-4	1	-JS-255	2	BK	14 (AWG)	1510.87	PEC FAN GND	W0102
							1510.87		

16 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
147	-SP-4	2	-BS-0221	10	BK	16 (AWG)	111.21	PE FAN GND	W0102
148	-SP-4	2	-BS-0221	2	BK	16 (AWG)	112.35	PE FAN GND	W0102
83	-JS-235A	H1	-X-214	12E	RD	16 (AWG)	1227.83	VMAX1_Power	W0102
112	-BP-001	29	-JS-0240	6	RD	16 (AWG)	926.97	Steering_Valve_Pwr	W0102
97	-BS-022	1	-JS-0239	10	RD	16 (AWG)	1070.95	ACDB PWR	W0102
64	-BP-001	12	-X-214	2B	RD	16 (AWG)	1077.81	Ecotron_Roof_Power_1	W0102
65	-BP-001	13	-X-214	2C	RD	16 (AWG)	1076.28	Ecotron_Roof_Power_2	W0102
66	-BP-001	14	-X-214	2D	RD	16 (AWG)	1076.56	Ecotron_Roof_Power_3	W0102
67	-BP-001	15	-X-214	2E	RD	16 (AWG)	1078.62	Ecotron_Roof_Power_4	W0102
115	-BP-001	30	-X-214	12B	BK	16 (AWG)	1087.31	Emergency_Valve_GND	W0102
229	-BP-001	44	-JS-0244	6	RD	16 (AWG)	1216.25	PE_Pump_PWR (DO10)	W0102
84	-JS-235B	H1	-X-214	12D	RD	16 (AWG)	1189.34	VMAX2_Power	W0102
85	-JS-235C	H1	-X-214	12C	RD	16 (AWG)	1219.96	VMAX3_Power	W0102
155	-JS-253	7	-JS-0233	-VE	BK	16 (AWG)	589.75	5V USB Gnd	W0102
156	-JS-253	6	-JS-0234	-Ve	BK	16 (AWG)	668.79	12V Outlet Gnd	W0102

X ± 03		Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com		
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1		POWERBED HARNESS	SHEET NO. 45

-> 16 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
153	-SP-15	1	-JS-0233	+VE	RD	16 (AWG)	103.2	USB Outlet & 12V Outlet (DO9)	W0102
154	-SP-15	1	-JS-0234	+ve	RD	16 (AWG)	161.32	USB Outlet & 12V Outlet (DO9)	W0102
146	-SP-15	2	-JS-0244	5	RD	16 (AWG)	1410.58	USB Outlet & 12V Outlet (DO9)	W0102
143	-SP-17	1	-JS-0245	2	BK	16 (AWG)	206.76	Low Beams (DO2)	W0102
158	-SP-17	2	-JS-249L	A	BK	16 (AWG)	1698.15	Low_Beam_Pwr	W0102
157	-SP-17	2	-JS-249R	A	BK	16 (AWG)	2329.66	Low_Beam_Pwr	W0102
142	-SP-18	2	-JS-0245	1	BU	16 (AWG)	206.27	Running Lights (DO1)	W0102
160	-SP-18	1	-JS-249L	C	BU	16 (AWG)	1693.17	DRL_PWR	W0102
159	-SP-18	1	-JS-249R	C	BU	16 (AWG)	2326.28	DRL_PWR	W0102
144	-SP-19	2	-JS-0245	3	GN	16 (AWG)	202.77	High Beams (DO3)	W0102
162	-SP-19	1	-JS-249L	F	GN	16 (AWG)	1693	High_Beam_PWR	W0102
161	-SP-19	1	-JS-249R	F	GN	16 (AWG)	2323.55	High_Beam_PWR	W0102
149	-SP-3	2	-BS-0221	1	RD	16 (AWG)	114.86	PE FAN 1 & 2 PWR	W0102
150	-SP-3	2	-BS-0221	11	RD	16 (AWG)	112.71	PE FAN 3&4 PWR	W0102
							28312.3		

16 AWG-41098

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
138	-JS-249L	E	-JS-255	3	BK	16 (AWG)	2121.21	Left Head Light GND	W0102
139	-JS-249R	E	-JS-255	11	BK	16 (AWG)	2482.01	Right Head Light GND	W0102
140	-BS-0231	10	-JS-255	12	BK	16 (AWG)	1174.23	HOC FAN GND (4,5,6)	W0102
136	-BS-0231	2	-JS-255	1	BK	16 (AWG)	1175.38	HOC FAN GND (1,2,3)	W0102
94	-BS-022	2	-JS-254	4	BK	16 (AWG)	931.63	ACDB Ground	W0102
95	-JS-0238	11	-JS-254	9	BK	16 (AWG)	1054.79	mRFRM GND	W0102
							8939.25		

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
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SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 46

18 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
163	-JS-021	1	-JS-0245	4	RD	18 (AWG)	2439.7	Horn_Pwr_(DO4)	W0102
164	-JS-253	3	-JS-022	1	BK	18 (AWG)	2140.08	Horn_Gnd	W0102
55	-SP-42	2	-JS-225	1	RD	18 (AWG)	116.7	MTA_DASH_PWR	W0102
56	-SP-42	2	-JS-225	10	RD	18 (AWG)	115.72	MTA_DASH_IGN	W0102
75	-SP-51	1	-JS-0239	3	RD	18 (AWG)	0	Vmax's PWR_12V_Input(F20)	W0102
80	-SP-51	2	-X-214	11C	RD	18 (AWG)	0	Vmax's PWR_12V_Input(F20)	W0102
81	-SP-51	2	-X-214	11D	RD	18 (AWG)	0	Vmax's PWR_12V_Input(F20)	W0102
82	-SP-51	2	-X-214	11E	RD	18 (AWG)	0	Vmax's PWR_12V_Input(F20)	W0102
76	-SP-52	1	-JS-0239	2	RD	18 (AWG)	0	TFD2_12V_Input_From_mRF RM(F18, R8, NC)	W0102
106	-SP-52	2	-X-214	7A	RD	18 (AWG)	0	TFD2_12V_Input_From_mRF RM(F18, R8, NC)	W0102
77	-SP-52	2	-X-214	9E	RD	18 (AWG)	0	TFD2_12V_Input_From_mRF RM(F18, R8, NC)	W0102
90	-SP-53	2	-X-214	1B	RD	18 (AWG)	0	Ecotron_12V	W0102
91	-SP-53	2	-X-214	1C	RD	18 (AWG)	0	Ecotron_12V	W0102
92	-SP-53	2	-X-214	1D	RD	18 (AWG)	0	Ecotron_12V	W0102
93	-SP-53	2	-X-214	1E	RD	18 (AWG)	0	Ecotron_12V	W0102
							4812.2		

18 AWG-41097

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
22	-JS-253	2	-SP-11	1	BK	18 (AWG)	911.27	TFD_GND	W0102
23	-JS-253	4	-SP-16	1	BK	18 (AWG)	892.86	Hand Throttle Ground	W0102
231	-JS-0239	8	-SP-53	1	RD	18 (AWG)	0	Ecotron_12V	W0102
123	-JS-0240	1	-SP-20	2	RD	18 (AWG)	212.82	MTA_DASH_PWR_AND_IGN_AND_SHIFT_DIAL_PWR	W0102
33	-JS-226	2	-SP-16	2	BK	18 (AWG)	944.59	Hand Throttle Ground	W0102

X ± 03

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Monarch Tractor
203 Lawrence Drive
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SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 47

-> 18 AWG-41097

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
34	-JS-226	5	-SP-16	2	BK	18 (AWG)	944.59	Hand Throttle Ground	W0102
35	-JS-227	3	-SP-11	2	BK	18 (AWG)	195.93	TFD_GND_1	W0102
36	-JS-228	3	-SP-11	2	BK	18 (AWG)	185.34	TFD_GND_2	W0102
							4287.4		

18 AWG-41098

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
24	-JS-229	6	-JS-253	8	BK	18 (AWG)	999.55	Start_Button_GND_LED-	W0102
57	-JS-225	2	-JS-253	1	BK	18 (AWG)	1051.18	MTA_GND	W0102
							2050.73		

20 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
42	-JS-225	14	-JS-262	5	VT	20 (AWG)	981.56	DRL_Din_6 (Purple_Wire_1)	W0102
49	-JS-225	15	-JS-262	7	BK	20 (AWG)	979.63	Low_Beam_Din_6(BLK_Wire_3)	W0102
44	-JS-225	23	-JS-262	8	BU	20 (AWG)	0	Right_Turn_Din_10(GY_WIRE_7)	
45	-JS-225	24	-JS-262	9	BN	20 (AWG)	980.24	Left_Turn_Din_9(RD_Wire_6)	W0102
48	-JS-225	4	-JS-262	6	WH	20 (AWG)	982.32	High_Beam_Din_1(White_Wire_5)	W0102
43	-JS-225	6	-JS-262	10	OG	20 (AWG)	982.32	Hazard_Din_3(YL_Wire_4)	W0102
168	-JS-235B	C4	-JS-235C	D4	VT	20 (AWG)	380.31	HVIL+	W0102
167	-JS-235A	C4	-JS-235B	D4	VT	20 (AWG)	365.1	HVIL+	W0102
88	-JS-0241	4	-JS-0280	5	OG	20 (AWG)	1183.5	mRFRM Ign Relay (F4,R3,NO)	W0102
121	-JS-0240	3	-JS-229	2	RD	20 (AWG)	1073.44	IGN_SRC(Start_But_Comm)	W0102
39	-JS-225	18	-JS-0269	1	GY	20 (AWG)	1119.62	MTA_Sensor_GND	W0102

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
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SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 48

-> 20 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
40	-JS-225	20	-JS-0269	2	BU	20 (AWG)	1118.12	Front_Bed_Coolant_Temp_2.8 K@25C (Ain 12)	W0102
68	-JS-225	31	-JS-229	1	GN	20 (AWG)	0	Start_Button_LED_+12V	W0102
53	-JS-225	13	-JS-230	3	BK	20 (AWG)	658.79	Neutral_Digi_In_4(HS/LS)	W0102
52	-JS-225	25	-JS-230	4	BU	20 (AWG)	0	DIGI-IN-8(HS/LS)	
51	-JS-225	5	-JS-230	2	GN	20 (AWG)	0	DIGI-IN-7(HS/LS)	
87	-JS-0238	5	-JS-0280	3	OG	20 (AWG)	1317.46	mRFRM Ign Hi	W0102
106	-BS-022	11	-JS-0241	1	RD	20 (AWG)	0	HVIL SRC FRM F2	
166	-BS-022	12	-JS-235A	D4	VT	20 (AWG)	0	ACDB HVIL IN	
122	-BP-001	34	-JS-0240	7	OG	20 (AWG)	930.7	12V hydraulic Ignition	W0102
69	-BP-001	18	-JS-0280	4	OG	20 (AWG)	909.87	mRFRM_Ign_Control	W0102
30	-BP-001	10	-JS-226	3	GN	20 (AWG)	1532.03	Hand Throttle Pos Sense CH2	W0102
131	-BP-001	39	-JS-226	1	YE	20 (AWG)	1536.6	Hand Throttle 5v PWR 1	W0102
132	-BP-001	40	-JS-226	6	YE	20 (AWG)	1538.92	Hand Throttle 5v Pwr 2	W0102
29	-BP-001	9	-JS-226	4	BU	20 (AWG)	1534.64	Hand Throttle Pos Sense CH1	W0102
165	-BP-001	31	-BS-022	10	BU	20 (AWG)	0	ACDB HVIL OUT	
116	-BP-001	28	-JS-0238	8	RD	20 (AWG)	1021.75	Front_Sensor_PWR	W0102
98	-BP-001	21	-JS-0239	1	RD	20 (AWG)	987.34	TTC580_UBATT	W0102
96	-BP-001	19	-JS-0240	4	RD	20 (AWG)	926.24	SEVCON_GEN5S_PWR	W0102
114	-BP-001	32	-X-214	12A	VT	20 (AWG)	1093.28	HVIL_Valve_Control	W0102
86	-JS-235C	C4	-JS-0280	2	OG	20 (AWG)	1028.83	HVIL_Pwr	W0102
118	-SP-1	2	-BP-001	24	RD	20 (AWG)	244.18	ISOBus + Trailer Acc	W0102
117	-SP-1	2	-BP-001	25	RD	20 (AWG)	241.57	ISOBus + Trailer Acc	W0102
107	-SP-1	1	-JS-0241	7	RD	20 (AWG)	659.62	ISOBus + Trailer Acc	W0102
220	-SP-10	2	-JS-0244	4	RD	20 (AWG)	865.91	HRI_PWR_(DO8)	W0102
151	-SP-2	2	-BP-001	41	RD	20 (AWG)	270.92	Trailer_Taillight(DO5)	W0102
152	-SP-2	2	-BP-001	42	RD	20 (AWG)	268.68	Trailer Brake Light(DO5)	W0102

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
www.monarchtractor.com

SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C
SCALE 1:1		POWERBED HARNESS	SHEET NO. 49

-> 20 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
145	-SP-2	1	-JS-0245	5	RD	20 (AWG)	884.28	Trailer Brake Taillight (DO5)	W0102
129	-SP-20	1	-BP-001	35	RD	20 (AWG)	798.93	Shift Dial Pwr	W0102
110	-SP-29	2	-BP-001	26	RD	20 (AWG)	376.62	Right_Turn_Signal	W0102
109	-SP-29	1	-JS-0241	10	RD	20 (AWG)	530.36	Right_Turn_Signal	W0102
111	-SP-29	2	-JS-249R	D	RD	20 (AWG)	1759.32	Right_Turn_Signal	W0102
120	-SP-30	2	-JS-0238	1	RD	20 (AWG)	134.24	12V Supply, mRFRM PWR (F22)	W0102
119	-SP-30	2	-JS-0238	9	RD	20 (AWG)	130.93	mRFRM PWR (F22)	W0102
113	-SP-30	1	-JS-0239	4	RD	20 (AWG)	150.2	mRFRM PWR (F22)	W0102
125	-SP-26	1	-JS-235B	D3	OG	20 (AWG)	88.9	Vmax's Ign from mRFRM	W0102
126	-SP-26	2	-JS-235C	D3	OG	20 (AWG)	302.52	Vmax's Ign from mRFRM	W0102
32	-SP-13	1	-BP-001	16	OG	20 (AWG)	442.19	TTC580_Ign	W0102
89	-SP-13	2	-JS-0239	6	OG	20 (AWG)	535.36	TTC580_Ign(F19,R9,NO)	W0102
31	-SP-13	1	-JS-229	5	OG	20 (AWG)	597.39	TTC580 Ign (Start_But_Norm_Open)	W0102
54	-SP-14	2	-JS-225	26	YE	20 (AWG)	123.9	VSS(+5 Vdc)	W0102
47	-SP-14	1	-JS-230	1	YE	20 (AWG)	545.32	VSS (+5 Vdc)	W0102
46	-SP-14	1	-JS-262	4	YE	20 (AWG)	865.63	VSS(+5 Vdc) (Green_Wire_2)	W0102
104	-SP-21	2	-BP-001	27	RD	20 (AWG)	771.39	Left_Turn_Signal	W0102
108	-SP-21	1	-JS-0241	8	RD	20 (AWG)	131.47	Left_Turn_Signal	W0102
105	-SP-21	2	-JS-249L	D	RD	20 (AWG)	1793.5	Left_Turn_Signal	W0102
128	-SP-27	1	-JS-0239	9	OG	20 (AWG)	983.65	Vmax's Ign from mRFRM	W0102
124	-SP-27	2	-JS-235A	D3	OG	20 (AWG)	134.74	Vmax's Ign from mRFRM	W0102
210	-SP-41	2	-BP-001	50	GN	20 (AWG)	214.07	CAN 3 LOW	W0102
191	-SP-36	2	-BP-001	46	WH	20 (AWG)	218.68	Main_CAN2_High	W0102
226	-SP-7	2	-BS-0221	8	BK	20 (AWG)	902.85	HRI_GND	W0102
225	-SP-7	2	-BS-0231	8	BK	20 (AWG)	966.97	HRI_GND	W0102
224	-SP-6	1	-BS-0221	5	RD	20 (AWG)	965.51	HRI_PEC_PWR	W0102

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
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SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 50

-> 20 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
223	-SP-6	2	-BS-0231	5	RD	20 (AWG)	818.56	HRI_PWR	W0102
38	-SP-46	1	-JS-227	5	VT	20 (AWG)	515.71	TFD_REDUNDANT_CAN4_LOW	W0102
37	-SP-47	1	-JS-227	4	WH	20 (AWG)	596	TFD_REDUNDANT_CAN4_HIGH	W0102
208	-SP-45	2	-BP-001	51	WH	20 (AWG)	205.36	CAN 3 HIGH	W0102
103	-SP-54	2	-X-214	11A	BK	20 (AWG)	0	HVIL_Relay_30	
232	-SP-54	2	-X-214	11B	BK	20 (AWG)	0	HVIL_Relay_85	
78	-X-214	8A	-JS-227	2	RD	20 (AWG)	0	TFD_PWR_1	W0102
79	-X-214	10E	-JS-228	2	RD	20 (AWG)	1246.34	TFD_PWR_2	W0102
214	-SP-8	1	-BS-022	5	BN	20 (AWG)	1045.66	PEC_PWM	W0102
215	-SP-9	1	-BS-022	6	BN	20 (AWG)	1238.84	HOC_PWM	W0102
							48728.9		

20 AWG-41097

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
219	-SP-6	1	-SP-10	2	RD	20 (AWG)	178.19	HRI_PWR	W0102
127	-SP-26	2	-SP-27	1	OG	20 (AWG)	155.74	Vmax's Ign from mRFRM	W0102
130	-SP-20	1	-SP-42	1	RD	20 (AWG)	879.5	MTA_PWR_AND_IGN	W0102
216	-BP-001	57	-SP-10	1	RD	20 (AWG)	368.86	HRI_PWR_Fender_and_B_Pilar	W0102
190	-BP-001	47	-SP-31	2	BU	20 (AWG)	0	Main_CAN2_Low	
186	-BP-001	53	-SP-46	2	VT	20 (AWG)	363.86	TFD_Main_CAN4_Low	W0102
188	-BP-001	52	-SP-47	2	WH	20 (AWG)	306.06	TFD_Main_CAN4_High	W0102
212	-JS-0224	2	-SP-7	1	BK	20 (AWG)	2102.74	F_HRI_GND	W0102
217	-JS-0224	1	-SP-10	1	RD	20 (AWG)	2137.09	F_HRI_PWR	W0102
187	-JS-0214	1	-SP-46	2	VT	20 (AWG)	266.89	TFD_Main_CAN4_Low	W0102
189	-JS-0214	2	-SP-47	2	WH	20 (AWG)	207.33	TFD_Main_CAN4_High	W0102
							6966.26		

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
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SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 51

20 AWG-41098

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
135	-JS-0245	12	-JS-254	7	BK	20 (AWG)	1180.16	IX3212 ID Select (DI1)	W0102
18	-JS-235A	C2	-JS-254	3	BK	20 (AWG)	963.4	VMAX A ID	W0102
19	-JS-235A	G4	-JS-254	11	BK	20 (AWG)	975.65	VMAX A GND	W0102
17	-JS-235B	B2	-JS-254	2	BK	20 (AWG)	924.37	VMAX B ID	W0102
20	-JS-235B	G4	-JS-254	12	BK	20 (AWG)	941.25	VMAX B GND	W0102
21	-BP-001	58	-JS-253	12	BK	20 (AWG)	879.45	HRI_GND_Fender_and_B_Pilar	W0102
16	-JS-235C	G4	-JS-254	1	BK	20 (AWG)	972.68	VMAX C GND	W0102
41	-JS-262	1	-JS-253	11	BK	20 (AWG)	278.4	Rotary Switch Ground1 (Brown_wire_8)	W0102
50	-JS-262	2	-JS-253	5	BK	20 (AWG)	275.93	Rotary Switch Ground2(Blue_Wire_9)	W0102
213	-SP-7	1	-JS-253	9	BK	20 (AWG)	614.83	HRI_GND	W0102
102	-SP-54	1	-JS-254	6	BK	20 (AWG)	0	HVIL_Relay_30	
							8006.12		

22 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
176	-SP-37	1	-JS-0238	2	WH	22 (AWG)	626.64	Main_CAN2_High	W0102
175	-SP-37	1	-JS-0246	12	WH	22 (AWG)	751.82	Main_CAN2_High	W0102
174	-SP-38	1	-JS-0238	3	BU	22 (AWG)	652.28	Main_CAN2_Low	W0102
173	-SP-38	1	-JS-0246	1	BU	22 (AWG)	778.81	Main_CAN2_Low	W0102
203	-SP-39	1	-JS-235B	A4	WH	22 (AWG)	273.85	CAN 3 HIGH	W0102
198	-SP-39	2	-JS-235C	A4	WH	22 (AWG)	111.7	CAN 3 HIGH	W0102
211	-SP-41	2	-BS-022	4	GN	22 (AWG)	562.9	CAN 3 LOW	W0102
201	-SP-40	1	-JS-235B	B4	GN	22 (AWG)	278.38	CAN 3 LOW	W0102
199	-SP-40	2	-JS-235C	B4	GN	22 (AWG)	115.43	CAN 3 LOW	W0102
207	-SP-43	2	-JS-225	17	WH	22 (AWG)	426.99	CAN 3 HIGH	W0102

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
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SIZE	JOB NO.	DRAWING NO.	REV.
B		W0102	C
SCALE 1:1		POWERBED HARNESS	SHEET NO. 52

-> 22 AWG-5251

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
205	-SP-44	2	-JS-225	16	GN	22 (AWG)	431.6	CAN 3 LOW	W0102
209	-SP-45	2	-BS-022	3	WH	22 (AWG)	595.9	CAN 3 HIGH	W0102
28	-SP-48	2	-JS-228	4	WH	22 (AWG)	402.43	TFD_Main_CAN2_HIGH	W0102
26	-SP-49	2	-JS-228	5	BU	22 (AWG)	395.73	TFD_MAIN_CAN2_LOW	W0102
170	-SP-5	1	-BS-0221	9	BU	22 (AWG)	321.98	Main_CAN_Low	W0102
221	-SP-9	2	-BS-0231	12	BN	22 (AWG)	124.38	HOC_FAN_PWM	W0102
222	-SP-9	2	-BS-0231	3	BN	22 (AWG)	121.08	HOC_FAN_PWM	W0102
228	-SP-8	2	-BS-0221	12	BN	22 (AWG)	180.47	HRI_PEC_PWM	W0102
227	-SP-8	2	-BS-0221	3	BN	22 (AWG)	177.18	HRI_PEC_PWM	W0102
172	-SP-28	1	-BS-0221	4	WH	22 (AWG)	322.46	Main_CAN2_High	W0102
192	-SP-34	2	-JS-235A	A4	WH	22 (AWG)	273.42	CAN 3 HIGH	W0102
195	-SP-35	2	-JS-235A	B4	GN	22 (AWG)	273.91	CAN 3 LOW	W0102
218	-JS-0224	9	-JS-0224	11	BK	22 (AWG)	0	Add Jump 2A	
							8199.34		

22 AWG-41097

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
171	-JS-0224	7	-SP-28	1	WH	22 (AWG)	0	Main_CAN_High	
169	-JS-0224	8	-SP-5	1	BU	22 (AWG)	0	Main_CAN_Low	
27	-JS-0212	1	-SP-48	2	WH	22 (AWG)	725.88	Main_CAN2_High	W0102
25	-JS-0212	2	-SP-49	2	BU	22 (AWG)	704.48	Main_CAN2_Low	W0102
194	-JS-0213	1	-SP-43	1	WH	22 (AWG)	213.08	CAN3 High	W0102
197	-JS-0213	2	-SP-44	1	GN	22 (AWG)	212.97	CAN3 Low	W0102
230	-BS-0231	9	-SP-32	1	BU	22 (AWG)	975.91	Main_CAN2_Low	W0102
177	-BS-0231	4	-SP-33	1	WH	22 (AWG)	938.36	Main_CAN2_High	W0102
200	-SP-35	1	-SP-40	1	GN	22 (AWG)	60.61	CAN 3 LOW	W0102

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
Livermore CA, 94551
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SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 53

-> 22 AWG-41097

Wire number	Origin	Origin terminal	Destination	Destination terminal	Color code	Section	Length (mm)	Signal	Harness
196	-SP-35	2	-SP-44	1	GN	22 (AWG)	351.51	CAN 3 Low	W0102
202	-SP-34	1	-SP-39	1	WH	22 (AWG)	58.05	CAN 3 HIGH	W0102
193	-SP-34	2	-SP-43	1	WH	22 (AWG)	353.24	CAN 3 HIGH	W0102
184	-SP-31	1	-SP-32	2	BU	22 (AWG)	185.05	Main_CAN2_Low	W0102
179	-SP-32	1	-SP-38	2	BU	22 (AWG)	158.43	MAIN_CAN2_LOW	W0102
185	-SP-32	2	-SP-49	1	BU	22 (AWG)	162.96	MAIN_CAN2_LOW	W0102
181	-SP-33	1	-SP-37	2	WH	22 (AWG)	244.83	MAIN_CAN2_HIGH	W0102
178	-SP-33	2	-SP-48	1	WH	22 (AWG)	148.84	MAIN_CAN2_HIGH	W0102
183	-SP-5	2	-SP-31	1	BU	22 (AWG)	460.89	Main_CAN2_Low	W0102
206	-SP-43	2	-SP-45	1	WH	22 (AWG)	307.29	CAN 3 HIGH	W0102
204	-SP-41	1	-SP-44	2	GN	22 (AWG)	194.94	CAN 3 LOW	W0102
180	-SP-36	1	-SP-28	2	WH	22 (AWG)	513.64	Main_CAN2_High	W0102
182	-SP-36	1	-SP-33	2	WH	22 (AWG)	204.24	Main_CAN2_High	W0102
							7175.2		

X ± 03		Monarch Tractor 203 Lawrence Drive Livermore CA, 94551 www.monarchtractor.com		
XXX ± 005	SIZE B	JOB NO.	DRAWING NO. W0102	REV. C
	SCALE 1:1		POWERBED HARNESS	SHEET NO. 64

Aptiv

	Mark	Description	Reference	Manufacturer	Quantity
1	-JS-0238 -JS-0239 -JS-0240 -JS-0241	20-18AWG Socket	10757690	Aptiv	17
2	-JS-0238 -JS-0239	12-10AWG Socket	10762802	Aptiv	2
3	-JS-0239 -JS-0240 -JS-0241	16-14AWG Socket	10762803	Aptiv	3
4	-X-214	Cavity Plug	12010300	Aptiv	28
5	-X-214	3.00-2.00mm2 terminal seal for metri-pack	12015323	Aptiv	18
6	-JS-249R -JS-249L	Headlight Automotive Connectors LOCK CPA PERP GRA	12020833	Aptiv	2
7	-JS-249R -JS-249L	M/P 1.5 Male Locking Lance Sealed Series	12045773	Aptiv	12
8	-JS-249R -JS-249L	Headlight LOCK SECONDARY TPA M/P 6 GRA MD	12052850	Aptiv	2
9	-X-214	SOC, SOLID, SIZE 18	12077411	Aptiv	4
10	-X-214	SOC, SOLID, SIZE 20	12084201	Aptiv	14
11	-X-214	0.50-0.35mm2 metri pack terminal seal	12089679	Aptiv	14
12	-JS-249R -JS-249L	Headlight Connector 6 Way 1.5 M/P 150 Sealed	12124107	Aptiv	2
13	-X-214	SOC, SOLID, SIZE 16	12129493	Aptiv	14
14	-JS-0239	10 way Female APEX 2.8	13576036	Aptiv	1
15	-JS-0238	16-18AWG Socket	13613157	Aptiv	1
16	-JS-0238	Automotive Connectors 1.5 Clean Body APEX Female SN Unsealed Terminal	13624983	Aptiv	4
17	-JS-0241	10W FEMALE HOUSING LT GRAY 2.8MM TRM SZ	13641403	Aptiv	1
18	-JS-0240	10W FEMALE HOUSING BLACK 2.8MM TERM SZ	15316895	Aptiv	1
19	-JS-249R -JS-249L	Single Wire Seal	15324973	Aptiv	12
20	-JS-0238	14W FM HSING BLK 1.5MM TERM SZ	33500361	Aptiv	1
21	-JS-0238 -JS-0239 -JS-0240 -JS-0241	Aptiv 54241629 Apex 1.5 Cavity Plug	54241629	Aptiv	17

X ± 03

XXX ± 005

Monarch Tractor
203 Lawrence Drive
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SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 54

APTIVE

	Mark	Description	Reference	Manufacturer	Quantity
1	-JS-249R	HEADLIGHT CONNECTOR LOCK CPA PERP GRA	12020833	APTIVE	1

Deutsch

	Mark	Description	Reference	Manufacturer	Quantity
1	-JP-0280	DT 2,3,4,6,12 /DTM/DTP Straight Gray plastic .200 (5.08) Mounting Clip	1011-026-0205	Deutsch	1
2	-BS-022	DT 12 Socket 90° Tube Size 10/13/17 Plug Backshell	1011-248-1205	Deutsch	1
3	-JS-253 -JS-0244 -JS-0245 -JS-255 -BS-0221 -BS-0231	DT 12 way plug boot, black	DT12S-BT-BK	Deutsch	6
4	-JP-0214 -JP-0212 -JP-0213	2 Pin SC20 AWG16-22 Receptacle	DTM04-2P-P006	Deutsch	3
5	-JS-230	DTM 4 way plug boot, black	DTM4S-BT-BK	Deutsch	1
6	-JS-0214 -JS-0212 -JS-0213	2 Socket SC20 AWG16-22 Plug	DTM06-2S	Deutsch	3
7	-JS-230	4 Socket SC20 AWG16-22 Plug	DTM06-4S	Deutsch	1
8	-JS-229	6 Socket	DTM06-6S	Deutsch	1
9	-JS-229	DTM 6 way plug boot, gray	DTM6S-BT	Deutsch	1
10	-JS-0247	DTP 2 way plug boot, gray	DTP2S-BT	Deutsch	1
11	-JS-0247	2 Socket SC12 AWG10-14 Plug	DTP06-2S	Deutsch	1
12	-BS-022 -JS-253 -JS-0244 -JS-0245 -JS-0246 -JS-255	DT Wedgelock for 12 way plug	W12S	Deutsch	6
13	-JS-0214 -JS-0212 -JS-0213	DTM Wedgelock for 2 way plug *A, B, C, D keying available	WM-2S	Deutsch	3
14	-JS-230	DTM Wedgelock for 4 way plug	WM-4S	Deutsch	1
15	-JS-229	DTM Wedgelock for 6 way plug	WM-6S	Deutsch	1

X ± 03

XXX ± 005

Monarch Tractor
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SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 55

Littelfuse

	Mark	Description	Reference	Manufacturer	Quantity
1	-F12	Littelfuse 0FHM0002ZXJ MINI In-Line Fuse Holder, 4" leads, 12Ga. Orange GXL Wire	0FHM0002ZXJ	Littelfuse	1
2	-R1 -R2	MINI RES ASSY 121 OHM 1/2W	02400107P	Littelfuse	2
3	-F3 -F4 -F8 -F13 -F14	5 A AC 32 V DC Fuse Automotive Holder Blade, Miniature	0297005.WXNV	Littelfuse	5
4	-F5 -F6 -F7 -F11 -F10 -F9	10 A AC 32 V DC Fuse Automotive Holder Blade, Miniature	0297010.WXNV	Littelfuse	6
5	-F1 -F2	20 A AC 32 V DC Fuse Automotive Holder Blade, Miniature	0297020.WXNV	Littelfuse	2

Littel fuse

	Mark	Description	Reference	Manufacturer	Quantity
1	-X-214	Relay and Fuse Module	PDM21001LXM	Littel fuse	1

X ± 03

XXX ± 005

Monarch Tractor
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SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 56

-> Molex

	Mark	Description	Reference	Manufacturer	Quantity
1	-SP-13 -SP-21 -SP-29 -SP-30 -SP-2 -SP-32 -SP-33 -SP-34 -SP-35 -SP-14 -SP-20 -SP-6 -SP-7 -SP-8 -SP-9 -SP-16 -SP-11 -SP-26 -SP-27 -SP-5 -SP-28 -SP-31 -SP-36 -SP-37 -SP-38 -SP-39 -SP-40 -SP-41 -SP-43 -SP-44 -SP-45 -SP-42 -SP-10 -SP-46 -SP-47 -SP-48 -SP-49 -SP-51 -SP-52 -SP-53 -SP-54	Butt splice 22-18AWG Perma-Seal	19164-0013	Molex	41
2	-SP-1 -SP-3 -SP-4 -SP-15 -SP-17 -SP-18 -SP-19	4 Terminals Butt splice 16-14AWG Perma-Seal	19164-0044	Molex	7
3	-SP-12	Butt splice 12-10AWG Perma-Seal	19164-0056	Molex	1
4	-JS-232B1	Ring terminal 12-10AWG Perma-Seal	19164-0067	Molex	1

X ± 03

XXX ± 005

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SIZE B | JOB NO. | DRAWING NO. W0102 | REV. C

SCALE 1:1 | POWERBED HARNESS | SHEET NO. 57

-> Molex

	Mark	Description	Reference	Manufacturer	Quantity
5	-SP-22	Butt splice 12-10 to 16-14AWG Perma-Seal	19164-0077	Molex	1
6	-JS-0269	MX64 Terminal, Black 2 Circuits	31403-2110	Molex	1
7	-JS-0269	Automotive Connectors MX64 F TERM 18-20AWG B WIND REEL 9000	33468-0003	Molex	2
8	-JS-0224	MX150 ASSY 1.5 RCPT 2X6 BLK A/12	33472-1201	Molex	1
9	-JS-0224	MX150 Cavity seal Plug	34345-0001	Molex	6
10	-JS-235A -JS-235B -JS-235C	CMC Receptacle Right Black 32 Circuits	64319-3211	Molex	3
11	-JS-235A -JS-235B -JS-235C	CMC 0.5mm sq crimp terminal	64322-1039	Molex	17

MOLEX

	Mark	Description	Reference	Manufacturer	Quantity
1	-JS-235A -JS-235B -JS-235C	1.50mm CMC CP Female Terminal, Tin Plated, for Tab Ddimensions 1.50mm x 0.80mm, Wire Size 0.50mm² - 1.0mm²	64323-1029	MOLEX	3

Molex

	Mark	Description	Reference	Manufacturer	Quantity
1	-JS-235A -JS-235B -JS-235C	CMC female Terminal Tin 1.5mm2 14-16 AWG	64323-1039	Molex	3
2	-JS-0224	MX 150 18-20 AWG Female Terminal	330122002	Molex	2
3	-JS-0224	MX150 Female Terminal for Mat-Sealed Connectors, Tin Plating, 22 AWG, Right Reel Payoff	330122003	Molex	4
4	-JS-0224	MX150 Backshell for Female Sealed Connector Assembly, 12 Circuit, without Rib	349511220	Molex	1
5	-JS-235A -JS-235B -JS-235C	CMC Wire Cap for 32 Circuits, CMC Receptacle Mat Sealed	643191201	Molex	3
6	-JS-235A -JS-235B -JS-235C	CMC Blind Plug for cavity 0.635mm	643251010	Molex	61
7	-JS-235A -JS-235B -JS-235C	CMC Blind Plug cavity 1.50mm	643251023	Molex	16

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Molex Perma-Seal :

	Mark	Description	Reference	Manufacturer	Quantity
1	-SP-50	Butt splice 12-10AWG Perma-Seal	19164-0056	Molex Perma-Seal :	1
2	-SP-23 -SP-24 -SP-25 -SP-55	14-16 Wire Splice	0191640044	Molex Perma-Seal :	4

Panduit

	Mark	Description	Reference	Manufacturer	Quantity
1	-JS-232A1	CONN TERM RECT TONG 1/0 AWG #3/8	LCA1/0-38F-X	Panduit	1
2	-X-0210A1	CONN RING FLAT 1/0AWG #1/2 CRIMP	S1/0-12R-X	Panduit	1

Song Chuan

	Mark	Description	Reference	Manufacturer	Quantity
1	-K1	Automotive Relays SPNO 20A 12VDC	303-1AH-C-R1-U01-12VDC	Song Chuan	1

TE Connectivity

	Mark	Description	Reference	Manufacturer	Quantity
1	-JS-262	COMPRUBBER PLUG SILICON	1-172888-3	TE Connectivity	9
2	-JS-226	MQS BU-GEH EDS 6P	1-967616-1	TE Connectivity	1
3	-JS-0233 -JS-0234 -JS-021 -JS-022	ULTRAFAST 250 ASSY REC 22-18 TPBR LP - 403233752 - 4-16211-9714 - AMP-2-0520184-2 - C57697-000	2-520184-2	TE Connectivity	6
4	-JS-225	S/S CONN REC CONTACT ASSEMBLY - 3900187-02	3-1447221-4	TE Connectivity	18
5	-JS-225	SUPER SEAL CONNERTOR, 34 POS	4-1437290-0	TE Connectivity	1
6	-JS-229	SEALING PLUG, SIZE 20, RED - $$0413-204-2005 - 0413-204-2005-AS - 0413-204-2005-L - 0413-204-2005-LD - 0413-204-2005-LS - 5-1899776-3 - ZPF000000000133669	0413-204-2005	TE Connectivity	2
7	-BP-001	PIN, SOLID, SIZE 16, 16-20AWG, NI - $$0460-202-16141 - 0460-202-16141-AS - 0460-202-16141-MS - 11810 - 2203596-1 - 4004200320 - 43019-000 - 5000887 - 8202612043 - 820E-37522 - ZPF000000000121709	0460-202-16141	TE Connectivity	33
8	-BP-001	PIN, SOLID, SIZE 8, 8-10AWG, NI - 0460-204-08141-AS	0460-204-08141	TE Connectivity	2
9	-BP-001	PIN, SOLID, SIZE 12, 12-14AWG, NI - $$0460-204-12141 - 0460-204-12141-AS - ZPF000000000133670	0460-204-12141	TE Connectivity	13

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-> TE Connectivity

	Mark	Description	Reference	Manufacturer	Quantity
10	-JS-229 -JS-230	SOC, SOLID, SIZE 20, 16-18AWG, NI - ZPF000000000167815	0462-005-20141	TE Connectivity	8
11	-BS-022 -JS-253 -JS-0244 -JS-0245 -JS-0246 -JS-254 -JS-255 -JS-0280 -BS-0221 -BS-0231	SOC, SOLID, SIZE 16, 16-20AWG, NI - $$0462-201-16141 - 11811 - 2203598-1 - 60.345.00 - ZPF000000000133620	0462-201-16141	TE Connectivity	66
12	-JS-0214 -JS-0212 -JS-0213	SOC, SOLID, SIZE 20, 20AWG, NI - 0462-201-20141-AS - 8202606750 - ZPF000000000133672	0462-201-20141	TE Connectivity	6
13	-JS-0247	SOC, SOLID, SIZE 12, 12-14AWG, NI - $$0462-203-12141 - 0462-203-12141-AS - 0462-203-12141-L - 0462-203-12141-LS - 0462-203-12141-M - 0462-203-12141-MS - 60.346.00 - ZPF000000000133673	0462-203-12141	TE Connectivity	2
14	-JS-0244 -JS-0245 -BS-0231	SOC, SOLID, SIZE 16, 14AWG, NI - $$0462-209-16141 - 0462-209-16141-AS - 0462-209-16141-MS - 2203599-1 - ZPF000000000131887	0462-209-16141	TE Connectivity	4
15	-JS-254 -JS-255	SOC, SF, SIZE 16, 14-18, NI/SN - 1062-16-0122-AS - 1062-16-0122-E - 1062-16-0122-L - 1062-16-0122-LD - 1062-16-0122-LS - 1062-16-0122-S - 1062-16-0122-SC - ZPF000000000131932	1062-16-0122	TE Connectivity	2
16	-BP-001	Dust Cap for 102 pins	3315-016-0005	TE Connectivity	1
17	-BP-001	PIN, SOLID, SIZE 4, 4AWG, NICKEL	5960-203-04141	TE Connectivity	2
18	-JS-242 -JS-243	SOCKET, SOLID, SIZE 4, 4AWG, NICKEL	5962-203-04141	TE Connectivity	2
19	-X-208C2 -X-208D2	Ring terminal 4 AWG Stud Size 10, Screw Terminals	33114	TE Connectivity	2
20	-X-208F1	TERMINAL,SOLIS R 8 1/4 - AMP-0-0033461-0 - BAH-1030 - CN5232-000	33460	TE Connectivity	1
21	-BS-022 -JS-253 -JS-0244 -JS-0245 -JS-0246 -JS-254 -JS-255 -JS-0280 -BP-001 -BS-0221 -BS-0231	SEALING PLUG, SIZE 12/16, WHT - $$114017 - 114017 - 114017-A - 114017-AS - 114017-B - 114017-E - 114017-L - 114017-LD - 114017-LS - 114017-M - 114017-MS - 114017-ZZ-E - 11814 - 8B.118.00	114017-ZZ	TE Connectivity	59
22	-BP-001	SEALING PLUG, SIZE 8, WHT - 114018 - 5-1899776-1 - ZPF000000000131734	114018-ZZ	TE Connectivity	3

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-> TE Connectivity

	Mark	Description	Reference	Manufacturer	Quantity
23	-BP-001	SEALING PLUG, SIZE 4, WHT - ZPF000000000131733	114019-ZZ	TE Connectivity	1
24	-X-208H1 -X-208H2	12 AWG, M5 Stud	170725-2	TE Connectivity	2
25	-JS-262	Sealing plug for rotary switch	172748-1	TE Connectivity	1
26	-JS-262	E-J MK-2 070 REC CONT LP - AMPS-0-0173707-1 - CA9310-000	173707-1	TE Connectivity	9
27	-JS-262	10 POS DL PLATE FOR PLUG MKII+	174656	TE Connectivity	1
28	-G2	TERMINAL,SOLIS R HR 4 3/8	323175	TE Connectivity	1
29	-JS-226	MQS BUCHS-KONT EDS	962885-5	TE Connectivity	6
30	-JS-226	MQS SGL WIRE SEAL - 0-0967067-1 - AMP-0-0967067-1 - EG9740-000	967067-1	TE Connectivity	6
31	-JS-262	070 ECONOSEAL MARK-2+ PLUG 10P	2822395-1	TE Connectivity	1
32	-BP-001	Powerbed Chassis Bulkhead	DRB12-102PAE-L018	TE Connectivity	1
33	-BP-001	BT DRB 102 WY 90DEG	DRB102-BT-90DEG	TE Connectivity	1
34	-BP-001	FLANGE, MOUNT, 102/128P, BLK, A - DRBF-1A-L - DRBF-1A-LD - DRBF-1A-LS - DRBF-1A-M - DRBF-1A-MS - ZPF000000000131750	DRBF-1A	TE Connectivity	1
35	-JP-0280	DT RECP ASM	DT04-6P-EP13	TE Connectivity	1
36	-JS-0280	6 Way DT PLUG ASM	DT06-6S-CE05	TE Connectivity	1
37	-JS-253 -JS-0244 -JS-254 -JS-255 -BS-0221 -BS-0231 -JS-0245 -BS-022 -JS-0246	DT PLUG ASM	DT06-12SA DT06-12SB DT06-12SC	TE Connectivity	9
38	-JS-0280	6 pin Connector boot for Ignition	DT6S-BT-YW	TE Connectivity	1
39	-JS-0246 -JS-254	DT 12 way plug boot, black	DT12S-BT-BK	TE Connectivity	2
40	-JS-242 -JS-243	PLG, 1P, BLK, N, SIZE 4 - DTHD06-1-4S-AS - ZPF000000000130117	DTHD06-1-4S	TE Connectivity	2
41	-JS-227 -JS-228	M12,FEMALE,STRAIGHT,A CODE,5P,PG9,GOLD	T4110002051-000	TE Connectivity	2
42	-JS-0280	WEDGE LOCK - W6S-P012-L - W6S-P012-LD - W6S-P012-LS - W6S-P012-M - W6S-P012-MS - ZPF000000000131457	W6S-P012	TE Connectivity	1

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-> TE Connectivity

	Mark	Description	Reference	Manufacturer	Quantity
43	-JS-254 -BS-0221 -BS-0231	WEDGE LOCK - W12S-AS - ZPF000000000131463	W12S	TE Connectivity	3
44	-BP-001	WEDGE LOCK - WB-51PAL-L - WB-51PAL-LD - WB-51PAL-LS - ZPF000000000131504	WB-51PAL	TE Connectivity	1
45	-BP-001	WEDGE LOCK - WB-51PAR-L - WB-51PAR-LD - WB-51PAR-LS - ZPF000000000131505	WB-51PAR	TE Connectivity	1
46	-JS-0247	WEDGE LOCK - ZPF000000000131483	WP-2S	TE Connectivity	1

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